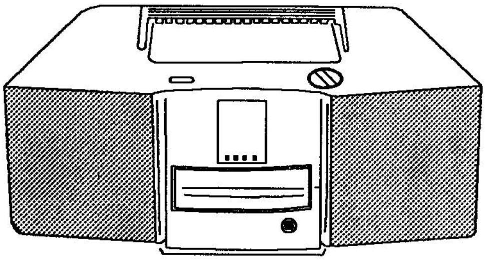
S/M Code No.0081 DATE OF ISSUE 7/1992-T

aiwa

CSD-EX5

SERVICE MANUAL



COMPACT DISC STEREO RADIO CASSETTE RECORDER

- BASIC TAPE MECHANISM : TN1800Z
- BASIC CD MECHANISM : KSL-2101A
- TYPE. U, E, K, Z

SPECIFICATIONS

General

Type	Compact disc stereo radio cassette recorder
Power source	Batteries, DC 12 V [R14P (size C) × 8] CSD-EX5U AC 120 V/220-240 V (switchable), 50/60 Hz CSD-EX5K AC 240 V, 50/60 Hz CSD-EX5E, Z AC 110-120 V/220-230 V (switchable), 50/60 Hz
Output	7 W + 7 W (6 Ω) DC MAX FTC Rule 4 Watts per channel, Min. RMS at 6 ohms, from 200 Hz to 10 kHz, with no more than 10% distortion.
Power consumption	CSD-EX5U 24 W CSD-EX5E, K, Z 36 W
Speakers	100 mm cone type (2)
Output terminal	PHONES jack : 3.5Φ stereo mini type (1) 370 mV/17 Ω
Dimensions(W × H × D)	460 × 148 × 202 mm 18 1/8 × 5 7/8 × 8 in
Weight	Approx. 4.6 kg (including batteries) Approx. 10.1 lb

Compact disc section

Disc	Compact disc
Scanning method	Non contact optical scanner (semi-conductor laser application)
Laser	Semiconductor laser $\lambda = 780$ nm
Rotation speed	Approx. 500-200 rpm/CLV
Error correction	Cross Interleave, Reed Solomon Code
No. of channels	2 channels
D. A. conversion	16 bit linear
Frequency response	40 Hz-20,000 Hz $^{+2}_{-6}$dB

Cassette deck section

Track format	4 tracks/2 channels
Recording format	AC bias
Erasing format	AC erase
Heads	Recording/Playback head (1) Erasure head (1)
Frequency response	Normal tape (Recording/Playback) : 50-12,500 Hz CrO2 tape (Recording/Playback) : 50-14,000 Hz Metal tape (Playback only) : 50-16,000 Hz

Tuner section

Frequency response	CSD-EX5U FM : 87.5-108 MHz AM : 530/531-1710/1602 kHz (10/9 kHz step) CSD-EX5E, K, Z FM : 87.5-108 MHz MW : 522/530-1611/1600 kHz (9/10 kHz step) LW : 153-288 kHz
Antennas	CSD-EX5U Whip antenna for FM Ferrite bar antenna for AM CSD-EX5E, K, Z Whip antenna for FM Ferrite bar antenna for MW and LW

- Design and specifications are subject to change without notice.

AIWA CO.,LTD. Tokyo Japan

Printed in Japan

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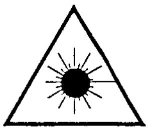
PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion.
  Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

CLASS 1
LASER PRODUCT

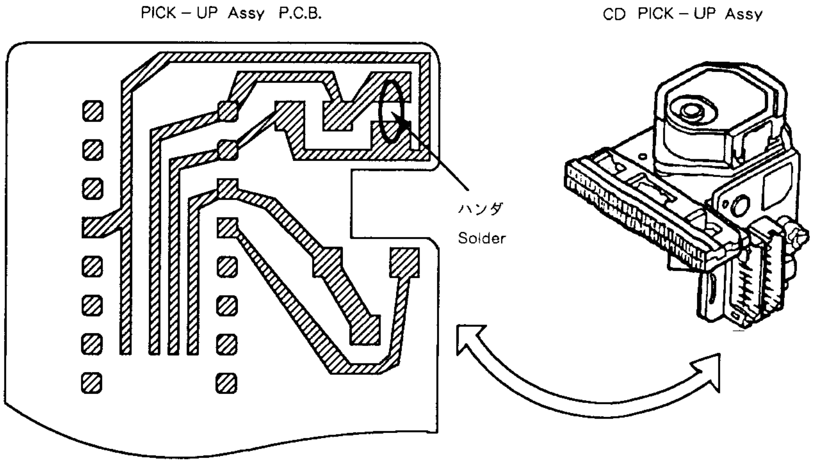
LUOKAN 1
LASERLAITE

KLASS 1
LASER APPARAT

Precaution to replace Optical block
(KSS – 210A)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.



DISSASEMBLY INSTRUCTIONS

1. "Cabinet, Front" Removal (See Figure – 1)
   1) Remove 9 screws (Ⓐ) from "Cabinet, Rear"and remove "Cabinet, Front".

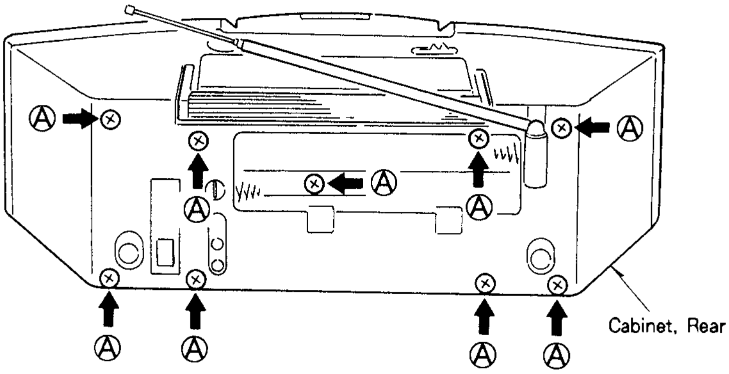

Ⓐ
Cabinet, Rear

Fig – 1

2. "Unit, Center" Removal (See Figure – 2)
   1) Open "Lid, Top".
   2) Remove "Knob, Power", "Knob, Volume" and then remove "Unit, Center" as shown in the direction of the arrow.

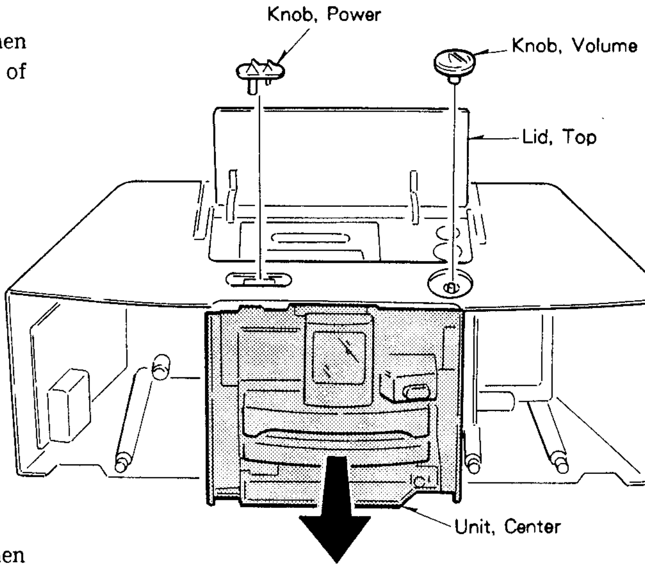

Knob, Power
Knob, Volume
Lid, Top
Unit, Center

Fig – 2

3. "Mechanism Assy" Removal (See Figure – 3)
   1) Remove 4 screws (Ⓐ), "Knob, Tone" and then remove "Cover, Top".
   2) Remove screw (Ⓑ) and remove "Mechanism Assy".

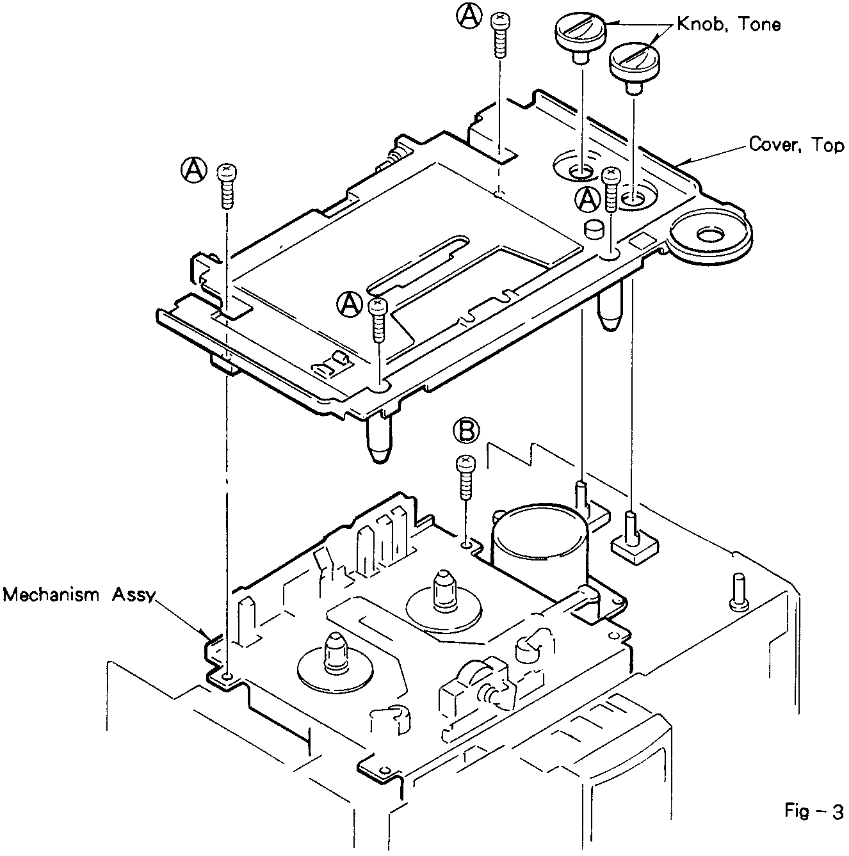
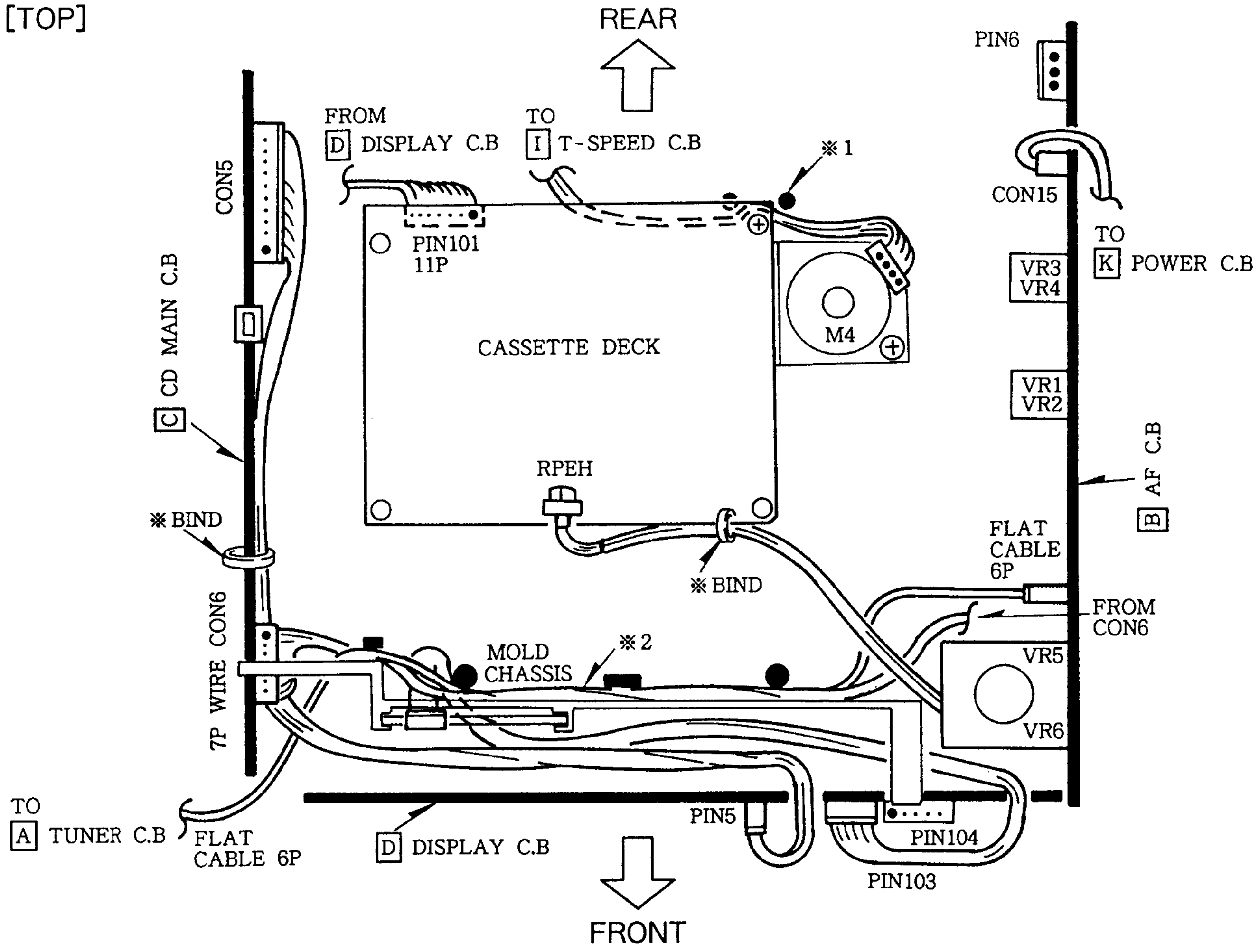

Ⓐ
Knob, Tone
Cover, Top
Ⓑ
Mechanism Assy

Fig – 3

CONNECTION GUIDE

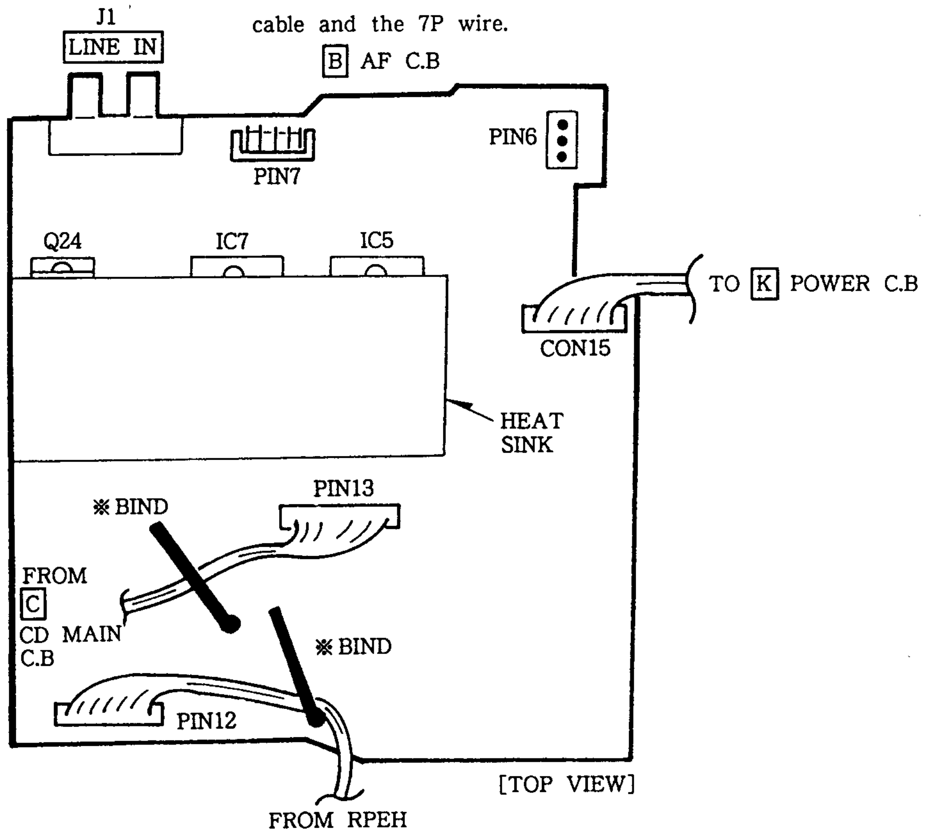
[TOP]


REAR
FROM
D DISPLAY C.B
TO
I T-SPEED C.B
※1
PIN6
CON15
TO
K POWER C.B
CON5
C CD MAIN C.B
PIN101
11P
CASSETTE DECK
M4
VR3
VR4
VR1
VR2
B AF C.B
RPEH
※BIND
※BIND
FLAT
CABLE
6P
FROM
CON6
7P WIRE CON6
MOLD
CHASSIS
※2
VR5
VR6
TO
A TUNER C.B
FLAT
CABLE 6P
D DISPLAY C.B
PIN5
PIN104
PIN103
FRONT

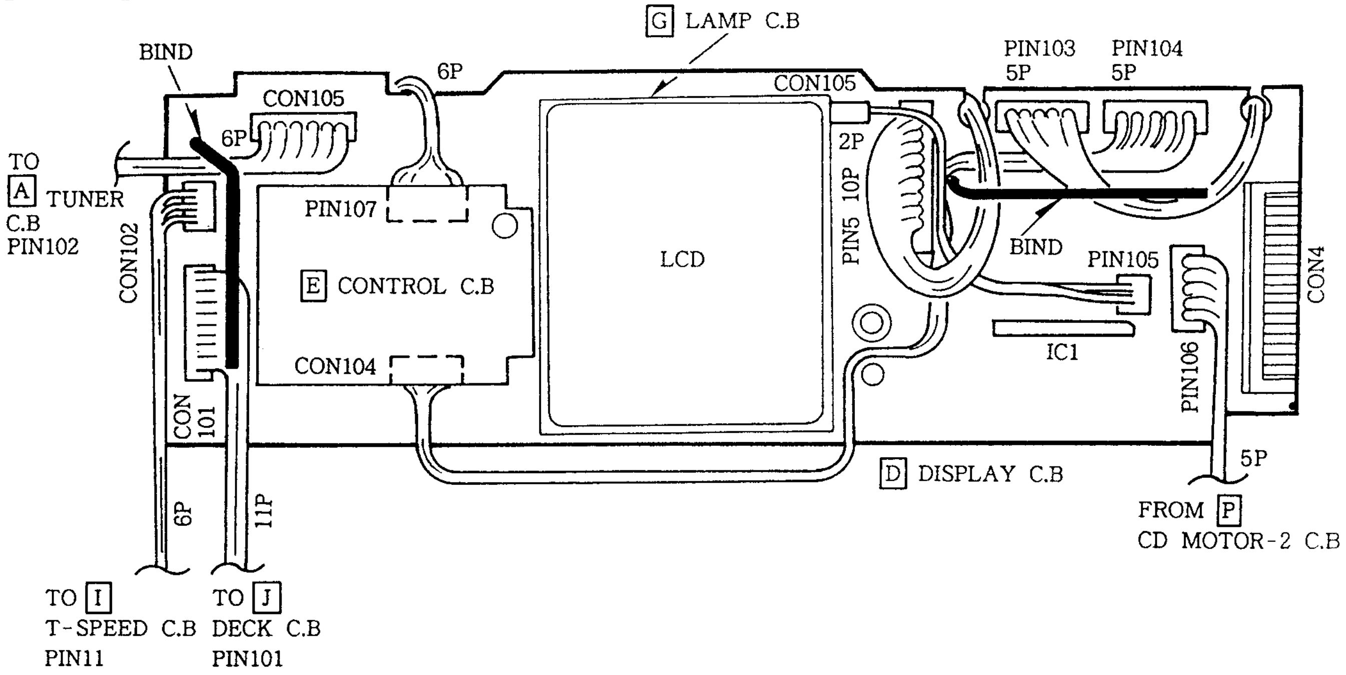
※1 Pass through between the pole and the 2 bosses.

※2 Pass through between the 6P flat cable and the 7P wire.

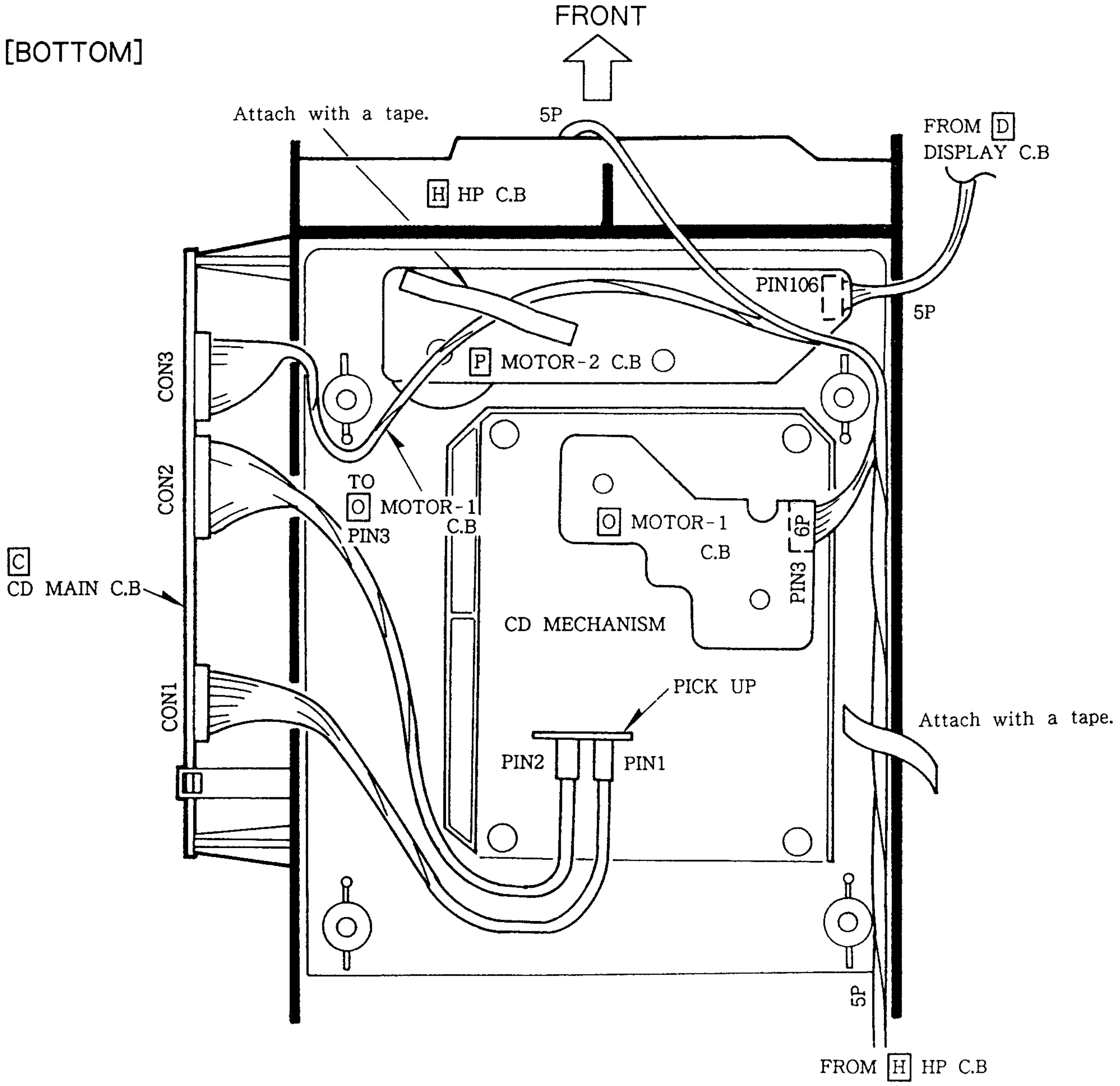
[AF]


B AF C.B
J1
LINE IN
PIN7
PIN6
Q24
IC7
IC5
TO K POWER C.B
CON15
HEAT
SINK
※BIND
PIN13
FROM
C
CD MAIN
C.B
※BIND
PIN12
[TOP VIEW]
FROM RPEH

[FRONT]


G LAMP C.B
BIND
6P
CON105
PIN103
5P
PIN104
5P
CON105
TO
A TUNER
C.B
PIN102
6P
PIN107
2P
PIN5 10P
LCD
BIND
PIN105
CON102
E CONTROL C.B
IC1
CON4
CON104
CON 101
PIN106
D DISPLAY C.B
5P
FROM P
CD MOTOR-2 C.B
6P
11P
TO I
T-SPEED C.B
PIN11
TO J
DECK C.B
PIN101

[BOTTOM]


FRONT
Attach with a tape.
5P
FROM D
DISPLAY C.B
H HP C.B
PIN106
5P
P MOTOR-2 C.B
CON3
CON2
TO
O MOTOR-1
C.B
PIN3
O MOTOR-1
C.B
6P
PIN3
C
CD MAIN C.B
CD MECHANISM
CON1
PICK UP
Attach with a tape.
PIN2
PIN1
5P
FROM H HP C.B

ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
===IC===		
	87-002-258-010	IC, AN8377N
	87-002-341-010	IC, BA5413
	87-002-427-010	IC, BA6209N
	81-CD1-656-010	IC, BU3559CK
	87-002-669-010	IC, GP1U571X(REMOTE SENSOR)
	⚠87-001-196-010	IC, ICP-N10
	⚠87-001-486-010	IC, ICP-N15
	⚠87-001-211-010	IC, ICP-N50
	87-002-268-010	IC, LA1851N
	S6-804-060-020	IC, LB9050A
	87-001-927-010	IC, LC7218M
	81-CD1-604-010	IC, LC6543H-4758
	87-001-180-010	IC, M5223L
	87-027-842-010	IC, NJM2904M
	87-001-206-010	IC, S81250HG
	87-002-413-010	IC, SN74HCU04NS
	87-001-176-010	IC, TA8102P
	87-002-264-010	IC, TA8176F
	87-002-407-010	IC, TA8191F
	87-002-408-010	IC, TC9236F
	87-002-272-010	IC, TC4052BF
	87-002-266-010	IC, TC40H002P
	87-001-516-010	IC, TK11821
	81-CD1-653-010	IC, TMP47C820F-3392
	87-027-910-010	IC, UPC1228HA
	87-002-259-010	IC, UPD6376GS
===TRANSISTOR===		
	87-026-225-010	FET, 2SJ106GR
	89-502-094-010	FET, 2SK209Y
	89-502-114-010	FET, 2SK211Y
	89-111-624-010	TRANSISTOR, 2SA1162Y
	89-112-965-010	TRANSISTOR, 2SA1296GR
	89-113-625-010	TRANSISTOR, 2SA1362GR
	89-113-624-010	TRANSISTOR, 2SA1362Y
	87-026-463-010	TRANSISTOR, 2SA933S RS
	89-109-521-010	TRANSISTOR, 2SA952K
	89-213-292-010	TRANSISTOR, 2SB1329Q
	89-213-702-010	TRANSISTOR, 2SB1370E
	87-026-462-010	TRANSISTOR, 2SC1740S RS
	89-327-124-010	TRANSISTOR, 2SC2712Y
	89-327-143-010	TRANSISTOR, 2SC2714(O)
	89-232-654-010	TRANSISTOR, 2SC3265Y
	87-026-233-010	TRANSISTOR, DTA114TK
	87-026-231-010	TRANSISTOR, DTA124XK
	87-026-226-010	TRANSISTOR, DTA143EK
	87-026-229-010	TRANSISTOR, DTA143XK
	87-026-211-010	TRANSISTOR, DTA144EK
	87-026-486-010	TRANSISTOR, DTA144TS
	87-026-239-010	TRANSISTOR, DTC114TK
	87-026-291-010	TRANSISTOR, DTC124XS
	87-026-237-010	TRANSISTOR, DTC124XK
	87-026-295-010	TRANSISTOR, DTC144TK
===DIODE===		
	87-001-574-010	DIODE, 1SR139-200
	87-020-465-010	DIODE, 1SS133
	87-001-783-019	DIODE, 1N4002-T
	87-020-289-010	DIODE, DAN235K
	87-002-225-010	DIODE, DBF 40C-K10
	87-020-125-010	DIODE, CHIP 1SS181
	87-020-027-010	DIODE, CHIP 1SS184
	87-020-339-010	DIODE, CHIP 1SS226
	87-001-142-010	DIODE, CHIP 1SS294
	87-001-911-010	DIODE, ZENER UTZJ4.7A
	87-020-579-010	DIODE, ZENER CHIP 02CZ3.6Z
	87-020-764-010	DIODE, ZENER CHIP 02CZ4.7X
	87-020-584-010	DIODE, ZENER CHIP 02CZ5.6Y
	87-020-586-010	DIODE, ZENER CHIP 02CZ6.8Y
	87-020-588-010	DIODE, ZENER CHIP 02CZ8.2Y
===TUNER CIRCUIT BOARD SECTION===		
BPF1	★87-030-254-010	FILTER, BPMB6AT
C1	★87-010-312-010	CAP, CHIP S 15P-50 CH(U)
C1	★87-010-314-010	CAP, CHIP S 22P-50 CH(E, K, Z)
C2	★87-010-312-010	CAP, CHIP S 15P-50 CH(U)
C2	★87-010-313-010	CAP, CHIP S 18P-50 CH(E, K, Z)
C3	★87-015-819-010	CAP, CHIP 0.01
C4	★87-010-178-010	CAP, CHIP S 1000P-50 B
C5	★87-010-151-010	CAP, CHIP S 7P-50 CH
C6	★87-010-197-010	CAP, CHIP S 0.01-25 B
C7	★87-010-544-010	CAP, ELECT 0.1-50
C8	★87-010-146-010	CAP, CHIP S 2P-50 CH
C9	★87-010-151-010	CAP, CHIP S 7P-50 CH
C10	★87-010-322-010	CAP, CHIP S 100P-50 CH
C11	★87-010-145-010	CAP, CHIP S 1P-50 CH
C12	★87-010-197-010	CAP, CHIP S 0.01-25 B
C13	★87-012-157-010	CAP, CHIP S 330P-50 CH
C14	★87-010-148-010	CAP, CHIP S 4P-50 CH
C15	★87-010-312-010	CAP, CHIP S 15P-50 CH
C16	★87-010-178-010	CAP, CHIP S 1000P-50 B
C17	★87-010-197-010	CAP, CHIP S 0.01-25 B
C18	★87-010-197-010	CAP, CHIP S 0.01-25 B
C19	★87-010-312-010	CAP, CHIP S 15P-50 CH
C20	★87-010-197-010	CAP, CHIP S 0.01-25 B
C21	★87-010-197-010	CAP, CHIP S 0.01-25 B
C22	★87-010-197-010	CAP, CHIP S 0.01-25 B
C23	★87-010-197-010	CAP, CHIP S 0.01-25 B
C24	★87-010-322-010	CAP, CHIP S 100P-50 CH(E, K, Z)
C25	★87-010-171-010	CAP, CHIP S 270P-50 SL
C26	★87-018-147-010	CAP, CERA-SOL SS 10P-50 CH
C27	★87-018-125-010	CAP, CERA-SOL SS 330P-50 B
C28	★87-018-119-010	CAP, CERA-SOL SS 100P-50 B
C31	★87-010-544-010	CAP, ELECT 0.1-50
C32	★87-010-198-010	CAP, CHIP S 0.022-25 B(E, K, Z)
C33	★87-010-198-010	CAP, CHIP S 0.022-25 B(E, K, Z)
C35	★87-012-154-010	CAP, CHIP S 150P-50 CH(E, K, Z)
C36	★87-010-321-010	CAP, CHIP S 82P-50 CH(E, K, Z)
C37	★87-012-158-010	CAP, CHIP S 390P-50 CH
C38	★87-010-336-010	CAP, CHIP S 18P-50 UJ
C51	★87-010-198-010	CAP, CHIP S 0.022-25 B(E, K, Z)
C52	★87-010-198-010	CAP, CHIP S 0.022-25 B
C53	★87-010-198-010	CAP, CHIP S 0.022-25 B
C54	★87-010-198-010	CAP, CHIP S 0.022-25 B
C56	★87-010-198-010	CAP, CHIP S 0.022-25 B
C57	★87-010-197-010	CAP, CHIP S 0.01-25 B(E, K, Z)
C58	★87-010-154-010	CAP, CHIP S 10P-50 CH(E, K, Z)
C59	★87-010-178-010	CAP, CHIP S 1000P-50 B(E, K, Z)
C71	★87-010-197-010	CAP, CHIP S 0.01-25 B
C72	★87-010-198-010	CAP, CHIP S 0.022-25 B
C73	★87-010-248-010	CAP, ELECT 220-10 SME
C74	★87-010-402-010	CAP, ELECT 2.2-50 SME
C75	★87-010-197-010	CAP, CHIP S 0.01-25 B
C76	★87-010-188-010	CAP, CHIP S 6800P-50 B
C77	★87-012-156-010	CAP, CHIP S 220P CH
C78	★87-010-401-010	CAP, ELECT 1-50 SME
C79	★87-010-401-010	CAP, ELECT 1-50 SME
C80	★87-010-546-010	CAP, ELECT 0.33-50 SME
C81	★87-010-401-010	CAP, ELECT 1-50 SME
C82	★87-010-196-010	CAP, CHIP S 0.1-25 F
C83	★87-010-197-010	CAP, CHIP S 0.01-25 B
C84	★87-010-401-010	CAP, ELECT 1-50 SME
C85	★87-010-197-010	CAP, CHIP S 0.01-25 B
C86	★87-010-404-010	CAP, ELECT 4.7-50 SME

REF. NO.	PART NO.	DESCRIPTION
C87	★87-010-401-010	CAP, ELECT 1-50 SME
C89	★87-010-197-010	CAP, CHIP S 0.01-25 B
C90	★87-010-405-010	CAP, ELECT 10-50 SME
C91	★87-010-545-010	CAP, ELECT 0.22-50 SME
C92	★87-010-189-010	CAP, CHIP S 8200P-50 B
C93	★87-010-178-010	CAP, CHIP S 1000P-50 B
C94	★87-010-178-010	CAP, CHIP S 1000P-50 B
C95	★87-010-189-010	CAP, CHIP S 8200P-50B
C96	★87-010-545-010	CAP, ELECT 0.22-50 SME
C97	★87-010-221-010	CAP, ELECT 470-10
C98	★87-010-197-010	CAP, CHIP S 0.01-25 B
C111	★87-010-314-010	CAP, CHIP S 22P-50 CH
C112	★87-010-314-010	CAP, CHIP S 22P-50 CH
C113	★87-010-178-010	CAP, CHIP S 1000P-50 B
C114	★87-010-178-010	CAP, CHIP S 1000P-50 B
C115	★87-010-322-010	CAP, CHIP S 100P-50 CH
C116	★87-010-322-010	CAP, CHIP S 100P-50 CH
C117	★87-010-322-010	CAP, CHIP S 100P-50 CH
C118	★87-010-322-010	CAP, CHIP S 100P-50 CH
C119	★87-010-197-010	CAP, CHIP S 0.01-25 B
C120	★87-010-263-010	CAP, ELECT 100-10
C121	★87-010-197-010	CAP, CHIP S 0.01-25 B
C122	★87-010-197-010	CAP, CHIP S 0.01-25 B
C123	★87-010-402-010	CAP, ELECT 2.2-50 SME
C124	★87-010-197-010	CAP, CHIP S 0.01-25 B
C125	★87-012-317-010	CAP, CHIP S 39P-50 CH
C126	★87-010-316-010	CAP, CHIP S 33P-50 CH
C127	★87-010-197-010	CAP, CHIP S 0.01-25 B
C128	★87-010-197-010	CAP, CHIP S 0.01-25 B
C129	★87-010-374-010	CAP, ELECT 47-10 SME
C130	★87-010-177-010	CAP, CHIP S 820P-50 SL
C131	★87-010-316-010	CAP, CHIP S 33P-50 CH
C132	★87-010-196-010	CAP, CHIP S 0.1-25 F
C133	★87-010-197-010	CAP, CHIP S 0.01-25 B
C134	★87-010-544-010	CAP, ELECT 0.1-50
C135	★87-010-318-010	CAP, CHIP S 47P-50 CH
C136	★87-010-197-010	CAP, CHIP S 0.01-25 B
C138	★87-010-405-010	CAP, ELECT 10-50 SME
CF1	★87-008-261-010	FILTER, SFE10.7MA5-A(U)
CF1	★87-008-264-010	FILTER, SFE10.7MS2-A(E, K, Z)
CF2	★87-008-261-010	FILTER, SFE10.7MA5-A(U)
CF2	★87-008-264-010	FILTER, SFE10.7MS2-A(E, K, Z)
IFT1	★87-008-458-010	IFT, FM (QUAD) PS
L1	★87-003-118-010	COIL, 0.27UH
L3	★87-003-098-010	COIL, 2.2UH
L4	★87-003-152-010	COIL, 100UH
L5	★87-003-152-010	COIL, 100UH
L6	★87-003-152-010	COIL, 100UH
L7	★87-007-253-010	COIL, OSC LW PS(E, K, Z)
L8	★87-007-301-010	COIL, OSC MW PS
L10	★80-CD4-677-010	BAR ANT AM-U-J(U)
L9	★80-CD4-661-010	BAR ANT AM-E-J(E, K, Z)
L10	+ + +	BAR ANT AM-E(E, K, Z)
L11	★87-007-267-010	COIL, OSC DC-DC
MFT1	★87-008-460-010	FILTER, CFMT 450PS
SFR1	★87-024-173-010	SFR, 22K
SFR2	★87-024-171-010	SFR, 4.7K
TC1	★87-011-221-010	CAP, TRIMMER 30P VCS 1(E, K, Z)
TC2	★87-011-220-010	CAP, TRIMMER 20P VCT(U)
TC2	★87-011-219-010	CAP, TRIMMER 10P VCT(E, K, Z)
VC1	★87-002-283-010	VARICAP, CHIP SVC209-TA
VC2	★87-002-283-010	VARICAP, CHIP SVC209-TA
VC3	★87-026-435-010	VARICAP, CHIP KV1560(E, K, Z)
VC4	★87-026-435-010	VARICAP, CHIP KV1560
X1	★87-030-217-010	VIB, CRYSTAL 7.2 MHZ
X2	★87-030-218-010	VIB, CERAMIC KBR-457 HS15
===AF CIRCUIT BOARD SECTION===		
C1	★87-010-197-010	CAP, CHIP S 0.01-25 B
C4	★87-010-197-010	CAP, CHIP S 0.01-25 B
C5	★87-010-176-010	CAP, CHIP S 680P-50 SL
C6	★87-010-176-010	CAP, CHIP S 680P-50 SL
C7	★87-010-401-010	CAP, ELECT 1-50 SME
C8	★87-010-401-010	CAP, ELECT 1-50 SME
C9	★87-010-178-010	CAP, CHIP S 1000P-50 B
C10	★87-010-178-010	CAP, CHIP S 1000P-50 B
C11	★87-010-260-010	CAP, ELECT 47-25 SME
C12	★87-010-428-010	CAP, CHIP S 0.015-25 B
C13	★87-010-428-010	CAP, CHIP S 0.015-25 B
C14	★87-010-260-010	CAP, ELECT 47-25 SME
C15	★87-010-404-010	CAP, ELECT 4.7-50 SME
C16	★87-010-404-010	CAP, ELECT 4.7-50 SME
C17	★87-010-370-010	CAP, ELECT 330-6.3 SME
C18	★87-010-198-010	CAP, CHIP S 0.022-25 B
C19	★87-010-198-010	CAP, CHIP S 0.022-25 B
C20	★87-010-805-010	CAP, CHIP S 1-16 F
C21	★87-010-178-010	CAP, CHIP S 1000P-50 B
C22	★87-010-178-010	CAP, CHIP S 1000P-50 B
C23	★87-010-405-010	CAP, ELECT 10-50 SME
C24	★87-010-405-010	CAP, ELECT 10-50 SME
C25	★87-010-404-010	CAP, ELECT 4.7-50 SME
C26	★87-010-197-010	CAP, CHIP S 0.01-25B
C27	★87-010-185-010	CAP, CHIP S 3900P-50 B
C28	★87-010-197-010	CAP, CHIP S 0.01-25 B
C29	★87-010-185-010	CAP, CHIP S 3900P-50 B
C30	★87-010-404-010	CAP, ELECT 4.7-50 SME
C31	★87-010-260-010	CAP, ELECT 47-25 SME
C32	★87-010-805-010	CAP, CHIP S 1-16 F
C33	★87-010-805-010	CAP, CHIP S 1-16 F
C34	★87-010-178-010	CAP, CHIP S 1000P-50 B
C35	★87-010-178-010	CAP, CHIP S 1000P-50 B
C36	★87-010-178-010	CAP, CHIP S 1000P-50 B
C38	★87-010-196-010	CAP, CHIP S 0.1-25 F
C39	★87-010-260-010	CAP, ELECT 47-25 SME
C41	★87-010-182-010	CAP, CHIP S 2200P-50 B
C42	★87-010-197-010	CAP, CHIP S 0.01-25 B
C43	★87-010-263-010	CAP, ELECT 100-10
C44	★87-010-248-010	CAP, ELECT 220-10 SME
C45	★87-010-196-010	CAP, CHIP S 0.1-25 F
C46	★87-010-196-010	CAP, CHIP S 0.1-25 F
C47	★87-010-180-010	CAP, CHIP S 1500P-50 B
C48	★87-015-681-010	CAP, ELECT 10-16 7L
C49	★87-010-167-010	CAP, CHIP S 120P-50 SL
C50	★87-010-805-010	CAP, CHIP S 1-16 F
C51	★87-010-427-010	CAP, CHIP S 0.039-25 B
C52	★87-010-196-010	CAP, CHIP S 0.1-25 F
C53	★87-010-196-010	CAP, CHIP S 0.1-25 F
C54	★87-010-427-010	CAP, CHIP S 0.039-25 B
C55	★87-010-196-010	CAP, CHIP S 0.1-25 F
C56	★87-015-681-010	CAP, ELECT 10-16 7L
C57	★87-010-180-010	CAP, CHIP S 1500P-50 B
C58	★87-010-235-010	CAP, ELECT 470-16 SME
C59	★87-015-698-010	CAP, ELECT 4.7-50
C60	★87-015-698-010	CAP, ELECT 4.7-50
C61	★87-012-141-010	CAP, CHIP S 0.22-16 F
C62	★87-012-141-010	CAP, CHIP S 0.22-16 F
C63	★87-010-197-010	CAP, CHIP S 0.01-25 B
C64	★87-010-197-010	CAP, CHIP S 0.01-25 B
C65	★87-010-193-010	CAP, CHIP S 0.033-25 F
C66	★87-010-193-010	CAP, CHIP S 0.033-25 F
C67	★87-012-141-010	CAP, CHIP S 0.22-16 F
C68	★87-012-141-010	CAP, CHIP S 0.22-16 F
C69	★87-010-196-010	CAP, CHIP S 0.1-25 F
C70	★87-010-180-010	CAP, CHIP S 1500P-50 B

REF. NO.	PART NO.	DESCRIPTION
C71	★87-010-196-010	CAP, CHIP S 0.1-25 F
C72	★87-010-180-010	CAP, CHIP S 1500P-50 B
C73	★87-010-248-010	CAP, ELECT 220-10 SME
C74	★87-010-248-010	CAP, ELECT 220-10 SME
C75	★87-015-698-010	CAP, ELECT 4.7-50
C76	★87-010-248-010	CAP, ELECT 220-10 SME
C77	★87-010-197-010	CAP, CHIP S 0.01-25 B
C78	★87-010-178-010	CAP, CHIP S 1000P-50 B
C79	★87-015-698-010	CAP, ELECT 4.7-50
C80	★87-015-698-010	CAP, ELECT 4.7-50
C81	★87-010-260-010	CAP, ELECT 47-25 SME
C82	★87-010-197-010	CAP, CHIP S 0.01-25 B
C83	★87-010-174-010	CAP, CHIP S 470P-50 SL
C84	★87-015-681-010	CAP, ELECT 10-16 7L
C85	★87-010-394-010	CAP, ELECT 220-35 SME
C86	★87-015-681-010	CAP, ELECT 10-16 7L
C88	★87-010-263-010	CAP, ELECT 100-10
C90	★87-010-263-010	CAP, ELECT 100-10
C91	★87-010-260-010	CAP, ELECT 47-25 SME
C92	★87-010-260-010	CAP, ELECT 47-25 SME
C93	★87-010-405-010	CAP, ELECT 10-50 SME
C94	★87-010-403-010	CAP, ELECT 3.3-50 SME
C95	★87-010-405-010	CAP, ELECT 10-50 SME
C96	★87-010-405-010	CAP, ELECT 10-50 SME
C97	★87-010-405-010	CAP, ELECT 10-50 SME
C98	★87-010-403-010	CAP, ELECT 3.3-50 SME
C99	★87-010-381-010	CAP, ELECT 330-16 SME
C101	★87-010-263-010	CAP, ELECT 100-10
C102	★87-010-174-010	CAP, CHIP S 470P-50 SL
C103	★87-015-681-010	CAP, ELECT 10-16 7L
C104	★87-010-394-010	CAP, ELECT 220-35 SME
C105	★87-015-691-010	CAP, ELECT 10-16 7L
C107	★87-010-263-010	CAP, ELECT 100-10
C108	★87-010-260-010	CAP, ELECT 47-25 SME
C109	★87-010-221-010	CAP, ELECT 470-10
C110	★87-010-221-010	CAP, ELECT 470-10
C119	★87-010-167-010	CAP, CHIP S 120P-50 SL
C120	★87-010-382-010	CAP, ELECT 22-25 SME
C123	★87-010-450-010	CAP, CHIP 0.47-16 F
C125	★87-010-248-010	CAP, ELECT 220-10 SME
C126	★87-010-260-010	CAP, ELECT 47-25 SME
C128	★87-012-365-010	CAP, CHIP S 0.027-25V BK
J1	81-CD1-647-010	JACK ASSY, 2P(LINE IN)
L1	★87-005-396-010	COIL 5.6MMH LHL06
L2	★87-005-396-010	COIL 5.6MMH LHL06
L3	★89-CD4-657-010	COIL OSC BIAS
SFR1	★87-024-273-010	SFR, 22K DIA6 V
SFR2	★87-024-273-010	SFR, 22K DIA6 V
SW10	81-CD1-611-010	SW, PUSH(POWER SAVE)
VR1	★87-024-339-010	VR, 20KD(TONE)
VR2	+ + +	VR, 20KD(TONE)
VR3	★87-024-340-010	VR, 20KA(BASS RANGE)
VR4	+ + +	VR, 20KA(BASS RANGE)
VR5	87-024-338-010	MOTOR, VR 50KB(VOLUME)
VR6	+ + +	MOTOR, VR 50KB(VOLUME)
M5	+ + +	VR, MOTOR 50KB(VOLUME)

===CD MAIN CIRCUIT BOARD SECTION===

REF. NO.	PART NO.	DESCRIPTION
C1	★87-010-382-010	CAP, ELECT 22-25 SME
C2	★87-018-097-010	CAP, CERA-SOL 2.2P SL
C3	★87-018-209-010	CAP, CERA-SOL 0.1
C4	★87-018-105-010	CAP, CERA-SOL 12P SL
C5	★87-018-104-010	CAP, CERA-SOL 10P SL
C6	★87-010-248-010	CAP, ELECT 220-10 SME
C7	★87-018-134-010	CAP, CERA-SOL 0.01
C9	★87-010-545-010	CAP, ELECT 0.22-50 SME
C10	★87-010-263-010	CAP, ELECT 100-10
C11	★87-010-401-010	CAP, ELECT 1-50 SME
C12	★87-010-248-010	CAP, ELECT 220-10 SME
C13	★87-018-134-010	CAP, CERA-SOL 0.01
C15	★87-010-265-010	CAP, ELECT 33-16 SME
C16	★87-010-403-010	CAP, ELECT 3.3-50 SME
C17	★87-010-374-010	CAP, ELECT 47-10
C22	★87-018-205-010	CAP, CERA-SOL 0.022
C23	★87-018-117-010	CAP, CERA-SOL 68P SL
C24	★87-010-248-010	CAP, ELECT 220-10 SME
C25	★87-018-134-010	CAP, CERA-SOL 0.01
C27	★87-010-235-010	CAP, ELECT 470-16 SME
C28	★87-018-209-010	CAP, CERA-SOL 0.1
C29	★87-018-209-010	CAP, CERA-SOL 0.1
C30	★87-018-209-010	CAP, CERA-SOL 0.1
C31	★87-018-209-010	CAP, CERA-SOL 0.1
C32	★87-018-209-010	CAP, CERA-SOL 0.1
C33	★87-018-145-010	CAP, CERA-SOL 6.8P CH
C34	★87-018-145-010	CAP, CERA-SOL 6.8P CH
C35	★87-010-263-010	CAP, ELECT 100-10
C36	★87-018-134-010	CAP, CERA-SOL 0.01
C37	★87-018-134-010	CAP, CERA-SOL 0.01
C38	★87-010-263-010	CAP, ELECT 100-10
C39	★87-018-131-010	CAP, CERA-SOL 1000P
C43	★87-018-209-010	CAP, CERA-SOL 0.1
C44	★87-010-248-010	CAP, ELECT 220-10 SME
C45	★87-018-119-010	CAP, CERA-SOL 100P
C46	★87-018-134-010	CAP, CERA-SOL 0.01
C47	★87-018-134-010	CAP, CERA-SOL 0.01
C48	★87-018-134-010	CAP, CERA-SOL 0.01
C49	★87-018-134-010	CAP, CERA-SOL 0.01
C50	★87-010-374-010	CAP, ELECT 47-10
C51	★87-018-134-010	CAP, CERA-SOL 0.01
C52	★87-010-401-010	CAP, ELECT 1-50 SME
C53	★87-018-134-010	CAP, CERA-SOL 0.01
C57	★87-018-149-010	CAP, CERA-SOL 15P CH
C58	★87-018-149-010	CAP, CERA-SOL 15P CH
C60	★87-018-200-010	CAP, CERA-SOL SS 3900P
C64	★87-010-381-010	CAP, ELECT 330-16 SME
C101	★87-010-374-010	CAP, ELECT 47-10
C102	★87-010-374-010	CAP, ELECT 47-10
C105	★87-018-117-010	CAP, CERA-SOL 68P SL
C106	★87-018-117-010	CAP, CERA-SOL 68P SL
C107	★87-018-117-010	CAP, CERA-SOL 68P SL
C108	★87-018-117-010	CAP, CERA-SOL 68P SL
C109	★87-015-688-010	CAP, ELECT 4.7-35 7L
C110	★87-015-688-010	CAP, ELECT 4.7-35 7L
C111	★87-018-131-010	CAP, CERA-SOL 1000P
C112	★87-018-131-010	CAP, CERA-SOL 1000P
L1	★87-003-152-010	COIL 100UH
L2	★87-003-152-010	COIL 100UH
SFR1	★87-024-171-010	SFR, 4.7K
SFR2	★87-024-176-010	SFR, 100K
X1	★87-030-221-010	CERALOCK 16.93MHZ
X2	★87-030-216-010	VIB, CERAMIC 14.39MHz

===DISPLAY CIRCUIT BOARD SECTION===

REF. NO.	PART NO.	DESCRIPTION
C1	★87-010-260-010	CAP, ELECT 47-25 SME
C2	★87-010-405-010	CAP, ELECT 10-50 SME
C3	★87-010-450-010	CAP, CHIP 0.47-16 F
C4	★87-010-509-010	CAP, CHIP TANTALUM 3.3-16
C5	★87-015-819-010	CAP, CHIP 0.01BK
C6	★87-010-197-010	CAP, CHIP S 0.01-25 B
C7	★87-010-197-010	CAP, CHIP S 0.01-25 B
C8	★87-015-819-010	CAP, CHIP 0.01BK
C9	★87-010-450-010	CAP, CHIP 0.47-16 F
C10	★87-010-450-010	CAP, CHIP 0.47-16 F
C11	★87-010-313-010	CAP, CHIP S 18P-50 CH
C12	★87-010-312-010	CAP, CHIP S 15P-50 CH

REF. NO.	PART NO.	DESCRIPTION
C13	★87-010-197-010	CAP, CHIP S 0.01-25 B
C14	★87-010-510-010	CAP, CHIP TANTALUM 4.7-10
C16	★87-010-322-010	CAP, CHIP S 100P-50 CH
C17	★87-010-802-010	CAP, CHIP TANTALUM 2.2-4(A2)
C18	★87-010-154-010	CAP, CHIP S 10P-50 CH
C19	★87-010-154-010	CAP, CHIP S 10P-50 CH
L1	★87-003-246-010	COIL, CHIP 33UH
LCD1	81-CD1-605-010	LCD, HLC8047(DISPLAY)
LED1	87-002-734-010	LED SLR-55MC 4F GR(▶)
LED2	87-002-734-010	LED SLR-55MC 4F GR(◀)
LED3	87-002-284-010	LED SLB-55 DU 4F(❚❚)
LED4	87-002-285-010	LED SLB-55 VR 4F(REC●)
LED5	87-002-735-010	LED SLV-31YC Y(TAPE)
LED6	87-002-736-010	LED SLV-31VC R(LINE IN)
LED7	87-002-735-010	LED SLV-31YC Y(RADIO)
LED8	87-002-735-010	LED SLV-31YC Y(CD)
SW1	87-036-225-010	SW, TACT(OPEN/CLOSE)
X1	★87-030-194-010	VIB, X'TAL 32.768K5PPM
X2	★87-030-275-010	VIB, X'TAL 4.00MHz

===CONTROL CIRCUIT BOARD SECTION===

===TACT CIRCUIT BOARD SECTION===

SW1	87-036-225-010	SW, TACT(AM STEP)
SW2	87-036-267-010	SW, TACT(DOWN)
SW3	87-036-267-010	SW, TACT(UP)
SW4	87-036-267-010	SW, TACT(DISPLAY)
SW5	87-036-267-010	SW, TACT(SET)

===LAMP CIRCUIT BOARD SECTION===

PL1	87-035-409-010	LAMP HRS-3062A(LCD BACK LIGHT)
PL2	87-035-409-010	LAMP HRS-3062A(LCD BACK LIGHT)

===HP CIRCUIT BOARD SECTION===

C111	★87-010-263-010	CAP, ELECT 100-10
J2	87-009-216-010	JACK, DIA3.5 STS(PHONES)

===T-SPEED CIRCUIT BOARD SECTION===

SFR1	★87-024-352-010	SFR, 4.7K DIA6 H
SFR2	★87-024-352-010	SFR, 4.7K DIA6 H

===DECK CIRCUIT BOARD SECTION===

S1	S6-401-011-930	SW, LEAF(REC B)
S2	S6-401-011-930	SW, LEAF(REC A)
S3	S6-401-011-930	SW, LEAF(CrO2)
S4	S6-401-011-930	SW, LEAF(CST)

REF. NO.	PART NO.	DESCRIPTION
S5	S6-401-011-940	SW, LEAF(FR)
S6	S6-401-011-950	SW, LEAF(PLAY)
SOL1	★S1-888-210-070	SOLENOID(PLAY)
SOL2	★S1-888-210-070	SOLENOID(FR)

===POWER CIRCUIT BOARD SECTION===

⚠	★87-033-213-010	CLAMP, FUSE SMK(E, K, Z)
C112	★87-010-377-010	CAP, ELECT 3300-10 SME
C113	★87-010-780-490	CAP, ELECT 6800-25V
C127	★87-010-401-010	CAP, ELECT 1-50 SME
⚠F2	87-035-368-010	FUSE, 4A 250V TE(E, K, Z)
⚠J3	★87-009-039-010	AC JACK(AC～)(U)
⚠J3	87-049-784-010	AC JACK E(AC～)(E, K, Z)
⚠PT1	81-CD1-672-019	POWER TRANSFORMER ASSY U(U)
⚠PT1	81-CD1-671-019	POWER TRANSFORMER E(E, Z)
⚠PT1	81-CD1-673-019	POWER TRANSFORMER K(K)
⚠SW1	87-031-780-010	SW, SLIDE(AC VOLTAGE)(U, E, Z)

===POWER SW CIRCUIT BOARD SECTION===

C1	★87-015-696-010	CAP, ELECT 2.2-50
SW1	87-036-195-010	SW, SLIDE(POWER)

===BATT-A CIRCUIT BOARD SECTION===

===BATT-B CIRCUIT BOARD SECTION===

===MOTOR-1 CIRCUIT BOARD SECTION===

M1	9X-262-513-210	MOTOR GEAR ASSY(SLED)
M2	9X-262-513-310	MOTOR ASSY(W/CHASSIS, T.T)(SPINDLE)
SW1	91-572-085-110	SW, LEAF(INSIDE LIMIT)

===MOTOR-2 CIRCUIT BOARD SECTION===

M3	9X-262-511-710	MOTOR ASSY(LOADING)
SW2	91-572-086-110	SW, LEAF(OPEN)
SW3	91-572-086-110	SW, LEAF(CLOSE)

===CD GND CIRCUIT BOARD SECTION===

===RELAY CIRCUIT BOARD SECTION===

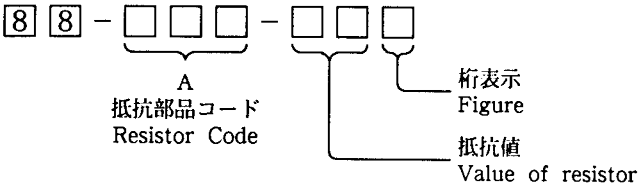
PCB-R	★S1-865-020-660	RELAY C.B

===MISCELLANEOUS===

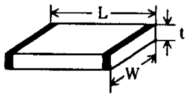
	98-848-127-11Z	OPTICAL PICK UP KSS-210A
CON12	★81-CD1-664-010	CONNECTOR ASSY, 8P RPEH
M4	S6-003-030-530	MOTOR(DECK)
RPEH	S6-202-060-060	R.P.E HEAD
SP1	81-CD1-612-010	SPEAKER, W(L CH)
SP2	81-CD1-612-010	SPEAKER, W(R CH)

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

Wattage 容量	Type 種類	Tolerance 許容誤差	Symbol 記号	Dimensions／寸法 (mm)				Resistor Code : A 抵抗コード : A
				Form/外形	L	W	t	
1/32W	1608	±5%	CJ		1.6	0.8	0.35	108
1/10W	2125	±5%	CJ		2	1.25	1.45	118
1/8W	3126	±5%	CJ		3.2	1.6	0.5 ～0.7	128

IC, DESCRIPTION

IC,TA8191F

Pin No.	Pin Name	I/O	Description
1	TPO	O	Sub-beam I-V amplifier (TP AMP) output terminal.
2	TPI	I	Sub-beam I-V amplifier (TP AMP) input terminal.
3	TNI	I	Sub-beam I-V amplifier (TP AMP) input terminal.
4	FNI	I	Main-beam I-V amplifier (FM AMP) input terminal.
5	FPI	I	Laser diode amplifier (LD AMP) input terminal.
6	LDO	O	Laser diode amplifier (LD AMP) output terminal.
7	MDI	I	Monitor photo diode amplifier (MD AMP) input terminal.
8	RFN	I	RF amplifier (RF AMP) negative-phase input terminal.
9	RFO	O	RF amplifier (RF AMP) output terminal.
10	RFI	I	RF ripple signal output terminal.
11	VREF	O	Reference voltage output terminal. (+2.1V)
12	RFRP	O	RF ripple signal output terminal.
13	SBAD	O	Scratch detection signal output terminal.
14	FEB	I	Focus error balance adjustment input terminal.
15	FEO	O	Focus error amplifier (FE AMP) output terminal.
16	SEL	I	Analog switch control signal input terminal.
17	VEE	—	Power terminal. (GND)
18	FSN	I	Focus output amplifier (FS AMP) negative-phase output terminal.
19	FSO	O	Focus output amplifier (FS AMP) output terminal.
20	COSC	I	Capacitor connection terminal for focus search signal generation.
21	OSCI	I	Built-in power supply control input terminal for focus search signal Generation.
22	GND	—	GND
23	VCC	I	Power supply terminal. (+5V)
24	DMEP	I	Disk motor amplifier (DM AMP) positive-phase input terminal.
25	DMEN	I	Disk motor amplifier (DM AMP) negative-phase input terminal.
26	DMEO	O	Disk motor amplifier (DM AMP) output terminal.
27	DMPO	O	Disk motor drive amplifier (DMP AMP) output terminal. (Not used.)
28	PVR	I	Drive amplifier reference voltage input terminal.
29	FMPO	O	Feed motor drive amplifier (FMP AMP) output terminal.
30	FMEO	O	Feed motor drive amplifier (FM AMP) output terminal.
31	FMEN	I	Feed motor amplifier (FM AMP) negative-phase input terminal.
32	FMEP	I	Feed motor amplifier (FM AMP) positive-phase input terminal.
33	FAPO	O	Focus actuator drive amplifier (FAP AMP) output terminal. (Not used.)
34	2VRO	O	2VREF amplifier (2VREF AMP) output terminal.
35	2VRP	I	2VREF amplifier (2VREF AMP) positive-phase input terminal.
36	2VRN	I	2VREF amplifier (2VREF AMP) negative-phase input terminal.
37	TS2O	O	Tracking servo amplifier 2 (TS2 AMP) output terminal.
38	TS2N	I	Tracking servo amplifier 2 (TS2 AMP) negative-phase input terminal.
39	TS2P	I	Tracking servo amplifier 2 (TS2 AMP) positive-phase input terminal.
40	TS1O	O	Tracking servo amplifier 1 (TS1 AMP) output terminal.
41	TS1N	I	Tracking servo amplifier 1 (TS1 AMP) negative-phase input terminal.
42	TS1P	I	Tracking servo amplifier 1 (TS1 AMP) positive-phase input terminal.
43	TSO	O	Tracking output amplifier (TS AMP) output terminal.
44	TSN	I	Tracking output amplifier (TS AMP) negative-phase input terminal.

IC,UPD6376GS

Pin No.	Pin Name	I/O	Description
1	4/8fs SEL	I	When this terminal is "Low" or open, data in L-ch and R-ch is input through pin 15 in time-division. When "High", data in L-ch is input through pin 15 and data in R-ch through pin 14 respectively. (Output is pulled-down through a resistor of 100 kohms in IC.) (GND)
2	D. GND	—	GND terminal for logic section.
3	NC	—	Not used.
4	D. +B	—	Power supply terminal for logic section. (+5V)
5	A. GND	—	GND terminal for analog section.
6	R. OUT	O	R-ch analog signal output terminal.
7	A. +B	—	Power supply terminal to analog section. (+5V)
8	A. +B		
9	R. REF	—	Reference voltage terminal. Normally connected to A.GND via capacitor so that an impedance of high frequency data is lowered.
10	L. REF		
11	L. OUT	O	L-ch analog signal output terminal.
12	A. GND	—	GND terminal for analog section.
13	LRCK	I	When pin 1 is "Low" or open, input data L/R discrimination signal is input. When "High", input data word discrimination signal is input.
14	LRSEL	I	When pin 1 is "Low" or open, L or R channel is selected for the LRCK signal. When the LRCK signal is "High" and L-ch data is input, the LRSEL terminal is "Low". When "Low" and L-ch data is input, the LRSEL terminal is "High". When pin 1 is "High", R-ch serial data is input. (+5V)
15	SI	I	When pin 1 is "Low" or open, L-ch and R-ch serial data is input alternatively. When "High", L-ch serial data is input.
16	CLK	I	Serial input data read-in clock input terminal.

IC,TC9236F

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>1</td><td>$\overline{\text{TEST4}}$</td><td>I</td><td>Test terminal. Normally "H" or open. (Not used.)</td></tr>
<tr><td>2</td><td>$\overline{\text{TEST5}}$</td><td>I</td><td>Test terminal. Normally "H" or open. (Not used.)</td></tr>
<tr><td>3</td><td>CK8M</td><td>O</td><td>8M clock output terminal. (Not used.)</td></tr>
<tr><td>4</td><td>COFS</td><td>O</td><td>Correction sytem frame frequency signal output terminal. 7.35kHz (Not used.)</td></tr>
<tr><td>5</td><td>SPDA</td><td>O</td><td>Processor status signal output terminal.
Correction/discrimination data, memory buffer capacity, etc. (Not used.)</td></tr>
<tr><td>6</td><td>PFCK</td><td>O</td><td>Playback system frame frequency signal output terminal. 7.35kHz (Not used.)</td></tr>
<tr><td>7</td><td>SUBSYC</td><td>O</td><td>Subcode sync signal output terminal. (Not used.)</td></tr>
<tr><td>8</td><td>SUBQ</td><td>O</td><td>Subcode Q data output terminal. (Not used.)</td></tr>
<tr><td>9</td><td>SBOK</td><td>O</td><td>Subcode Q data CRC check data output terminal. OK when "H". (Not used.)</td></tr>
<tr><td>10</td><td>XI</td><td>I</td><td rowspan="2">Crystal oscillator connection terminal.</td></tr>
<tr><td>11</td><td>XO</td><td>O</td></tr>
<tr><td>12</td><td>DVCC</td><td>—</td><td>Digital power voltage terminal. (+5V)</td></tr>
<tr><td>13</td><td>DGND</td><td>—</td><td>Digital GND terminal.</td></tr>
<tr><td>14
≀
17</td><td>BUS0
≀
BUS3</td><td>I/O</td><td>Command and data send/receive I/O terminal.</td></tr>
<tr><td>18</td><td>$\overline{\text{CCE}}$</td><td>I</td><td>Chip enable signal input terminal for command and data send/recieve.
Bus line active when "L".</td></tr>
<tr><td>19</td><td>BUCK</td><td>I</td><td>Command and data send/receive clock input terminal.</td></tr>
<tr><td>20</td><td>4MCK</td><td>O</td><td>4M clock output terminal. 4.2366MHz (Not used.)</td></tr>
<tr><td>21</td><td>$\overline{\text{RST}}$</td><td>I</td><td>Reset input terminal. Internal system reset when "L".</td></tr>
<tr><td>22</td><td>CCNT</td><td>I</td><td>Subcode Q data control bit update inhibition signal input terminal.
Update inhibitted when "H". (GND)</td></tr>
<tr><td>23</td><td>SUBO</td><td>O</td><td>Subcode P - W output terminal. (Not used.)</td></tr>
<tr><td>24</td><td>CLCK</td><td>I</td><td>Subcode P - W data read-out clock input terminal.</td></tr>
<tr><td>25</td><td>LOCK</td><td>O</td><td>Lock status output terminal. "L" when sync pattern siganal in EFM signal is not detected within 17 ms in runaway detection. (Not used.)</td></tr>
<tr><td>26</td><td>$\overline{\text{TEST1}}$</td><td>I</td><td>Test terminal. Normally "H" or open. (Not used.)</td></tr>
<tr><td>27</td><td>DFCT</td><td>O</td><td>Defect detection signal output terminal.
VREF when a defect signal is detected: Normally HiZ. (Not used.)</td></tr>
<tr><td>28</td><td>TEL2</td><td rowspan="2">O</td><td rowspan="2">Tracking gain adjustment analog switch output terminal. VREF or HiZ.</td></tr>
<tr><td>29</td><td>TEL1</td></tr>
<tr><td>30</td><td>TGUL</td><td>O</td><td>Analog switch output terminal for switching the low range phase compensator of the tracking servo loop.
HiZ (gain up) when shock signal is detected; VREF when gain up.</td></tr>
<tr><td>31</td><td>TGUH2</td><td rowspan="2">O</td><td rowspan="2">Analog switch output terminal for switching the middle and high range phase compensator of the tracking servo loop. HiZ (gain up) when shock signal is detected; normally VREF. TGUH1 is used when playing back in normal mode; TGUH2 when playing back in high speed mode.</td></tr>
<tr><td>32</td><td>TGUH1</td></tr>
<tr><td>33</td><td>TKIC</td><td>O</td><td>Tracking actuator kick signal output terminal.
Kicked to an external cylinder when "H"; an internal cylinder when "L".</td></tr>
<tr><td>34</td><td>FMON</td><td rowspan="2">O</td><td rowspan="2">Feed servo ON/OFF analog switch output terminal. (Pin ㉟ is not used.)<table><tr><th>Feed servo</th><th>FMON</th><th>$\overline{\text{FMON}}$</th></tr><tr><td>ON</td><td>HiZ</td><td>VREF</td></tr><tr><td>OFF</td><td>VREF</td><td>HiZ</td></tr></table></td></tr>
<tr><td>35</td><td>$\overline{\text{FMON}}$</td></tr>
</table>

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>36</td><td>FMFB</td><td>O</td><td>Feed motor FWD/BWD operation control signal output terminal.
Feeds to an external cylinder when "H"; feeds to an internal cylinder when "L".</td></tr>
<tr><td>37</td><td>$\overline{\text{TEST}}$</td><td>I</td><td>Test terminal. Normally "H" or open. (Not used.)</td></tr>
<tr><td>38</td><td>DMON</td><td>O</td><td>Analog switch output terminal for switching the gain of the disk motor drive circuit.</td></tr>
<tr><td>39</td><td>DMFC</td><td>O</td><td>Disk motor CLV servo AFC signal output terminal.<table><tr><th>Command</th><th>DMFC output</th><th>Operation</th></tr><tr><td>DMFK</td><td>H</td><td>Motor accelerated</td></tr><tr><td>DMSV</td><td>PWM</td><td>CLV servo ON</td></tr><tr><td>DMBK</td><td>L</td><td>Motor decelerated</td></tr><tr><td>DMOFF</td><td>VREF</td><td>CLV servo OFF</td></tr></table></td></tr>
<tr><td>40</td><td>DMPC</td><td>O</td><td>Disk motor CLV servo APC signal output terminal.</td></tr>
<tr><td>41</td><td>2VREF</td><td>I</td><td>Two times reference voltage input terminal. (VREF × 2)</td></tr>
<tr><td>42</td><td>SEL</td><td>O</td><td>Servo mode indication signal output terminal.<table><tr><th>SEL</th><th>LD ON/OFF</th><th>Focus servo</th><th>Operation mode</th></tr><tr><td>L</td><td>OFF</td><td>ON</td><td>LD OFF</td></tr><tr><td>HiZ</td><td>ON</td><td>OFF</td><td>Focus search</td></tr><tr><td>H</td><td>ON</td><td>ON</td><td>Normal PLAY etc.,
(Focus servo ON: FOK)</td></tr></table></td></tr>
<tr><td>43</td><td>FCSI</td><td>O</td><td>Focus actuator drive signal output terminal in focus search mode.<table><tr><th>Command</th><th>FKIC output</th><th>Operation</th></tr><tr><td>FGASR</td><td>H</td><td>Lens distant from disk</td></tr><tr><td>FGSS</td><td>L</td><td>Lens near disk</td></tr><tr><td>Others</td><td>HiZ</td><td>than focus search</td></tr></table></td></tr>
<tr><td>44</td><td>FKIC</td><td>O</td><td>Focus actuator drive signal output terminal in focus gain adjustment mode.
(Not used.)<table><tr><th>Command</th><th>FKIC output</th><th>Operation</th></tr><tr><td>FGASR</td><td>H</td><td>Lens distant from disk</td></tr><tr><td>FGSS</td><td>L</td><td>Lens near disk</td></tr><tr><td>Other</td><td>HiZ</td><td>Other than focus gain adjustment</td></tr></table></td></tr>
<tr><td>45</td><td>FEL2</td><td rowspan="2">O</td><td rowspan="2">Focus gain adjustment analog switch output termianal. (Not used.)</td></tr>
<tr><td>46</td><td>FEL1</td></tr>
<tr><td>47</td><td>FEI</td><td>I</td><td>Focus error signal input terminal.</td></tr>
<tr><td>48</td><td>TESH</td><td>I</td><td>Analog switch input terminal for sample-holding of the tracking error signal.</td></tr>
<tr><td>49</td><td>TEOF</td><td>O</td><td>Analog switch input terminal for tracking servo ON/OFF.
VFEF when tracking servo is OFF.</td></tr>
<tr><td>50</td><td>SBAD</td><td>I</td><td>Sub-beam add signal input terminal.</td></tr>
<tr><td>51</td><td>RFRP</td><td>I</td><td>RF ripple signal input terminal.</td></tr>
<tr><td>52</td><td>VREF</td><td>I</td><td>Reference voltage input terminal. (+2.2V)</td></tr>
<tr><td>53</td><td>RFI</td><td>I</td><td>RF signal input terminal.</td></tr>
<tr><td>54</td><td>AGND</td><td>—</td><td>Analog GND terminal.</td></tr>
<tr><td>55</td><td>DTSC2</td><td>O</td><td>EFM signal negative-phase output terminal for data slice control.</td></tr>
<tr><td>56</td><td>EFMO</td><td>O</td><td>EFM signal monitor output terminal. (Not used.)</td></tr>
<tr><td>57</td><td>DTSC1</td><td>O</td><td>EFM signal positive-phase output terminal for data slice control.</td></tr>
<tr><td>58</td><td>AVCC</td><td>—</td><td>Analog power voltage terminal. (+5V)</td></tr>
<tr><td>59</td><td>PDCNT</td><td>I</td><td>PDO output control terminal. PDO output is involuntarily set to HiZ when "L".</td></tr>
<tr><td>60</td><td>PDO</td><td>O</td><td>Output terminal for phase difference signal between EFM and PLCK signals.</td></tr>
</table>

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>61</td><td>TMAX</td><td>O</td><td>TMAX signal output terminal. HiZ in system clock.<table><tr><th>TMAX cycle</th><th>TMAX output</th></tr><tr><td>Longer than specified cycle</td><td>L</td></tr><tr><td>Shorter than specified cycle</td><td>H(2VREF)</td></tr><tr><td>Specified cycle</td><td>HiZ</td></tr></table></td></tr>
<tr><td>62</td><td>LPFN</td><td>I</td><td>LPF amplifier negative-phase input terminal for PLL.</td></tr>
<tr><td>63</td><td>LPFO</td><td>O</td><td>LPF amplifier output terminal for PLL.</td></tr>
<tr><td>64</td><td>VCOF</td><td>I</td><td>VCO filter terminal.</td></tr>
<tr><td>65</td><td>VCOX</td><td>I</td><td>External VCO clock input terminal. (GND)</td></tr>
<tr><td>66</td><td>PLCK</td><td>O</td><td>Playback data read clock output terminal. (Not used.)</td></tr>
<tr><td>67</td><td>MOD0</td><td rowspan="2">I</td><td rowspan="2">Internal operation mode setting input terminal. (GND)</td></tr>
<tr><td>68</td><td>MOD1</td></tr>
<tr><td>69</td><td>MOD2</td><td>I</td><td>Internal operation mode setting input terminal.</td></tr>
<tr><td>70</td><td>WDCK</td><td>O</td><td>Word clock output terminal. Normally 88.2kHz. (Not used.)</td></tr>
<tr><td>71</td><td>CHCK</td><td>O</td><td>Channel clock output terminal. Normally 44.1kHz.</td></tr>
<tr><td>72</td><td>BCK</td><td>O</td><td>Bit clock output terminal. Normally 1.4112MHz.</td></tr>
<tr><td>73</td><td>AOUT</td><td>O</td><td>Audio data output terminal.</td></tr>
<tr><td>74</td><td>CKSE</td><td>I</td><td>Internal clock selection terminal. (+5V)</td></tr>
<tr><td>75</td><td>DOUT</td><td>O</td><td>Digital OUT output terminal. (Not used.)</td></tr>
<tr><td>76</td><td>$\overline{\text{TEST2}}$</td><td>I</td><td>Test terminal. Normally "H" or open. (Not used.)</td></tr>
<tr><td>77</td><td>$\overline{\text{HS}}$</td><td>O</td><td>High-speed monitor output terminal. High-speed mode when "L". (Not used.)</td></tr>
<tr><td>78</td><td>EMPH</td><td>O</td><td>Emphasis ON/OFF indication signal output terminal. Emphasis ON when "H".</td></tr>
<tr><td>79</td><td>$\overline{\text{TEST3}}$</td><td>I</td><td>Test terminal. Normally "H" or open. (Not used.)</td></tr>
<tr><td>80</td><td>MCK</td><td>O</td><td>Master clock output terminal. (Not used.)</td></tr>
</table>

IC,LC7218M

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>1</td><td>X IN</td><td>I</td><td>Connected to the crystal clock oscillator.</td></tr>
<tr><td>2</td><td>CE</td><td>I</td><td rowspan="4">Input terminal of control data from microcomputer TMP47C820F-3638 (TMP47C820F-3665).</td></tr>
<tr><td>3</td><td>DI</td><td>I</td></tr>
<tr><td>4</td><td>CL</td><td>I</td></tr>
<tr><td>5</td><td>DO</td><td>I</td></tr>
<tr><td>6</td><td>SYN</td><td>—</td><td>Not used.</td></tr>
<tr><td>7</td><td>AS IN0</td><td>I</td><td>"L" when tuning. "H" in cases other than tuning.</td></tr>
<tr><td>8</td><td>LED IN1</td><td>I</td><td>"L" when stereo broadcasting. "H" in other case than stereo broadcasting.</td></tr>
<tr><td>9</td><td>$\overline{\text{OUT0}}$</td><td>O</td><td>Not used.</td></tr>
<tr><td>10</td><td>MODE1 $\overline{\text{OUT1}}$</td><td>O</td><td rowspan="2">Tuner sound mode selection output.<table><tr><td rowspan="3">FM mode</td><th>AUTO</th><th>MONO</th></tr><tr><td>H</td><td>L</td></tr><tr><td>L</td><td>H</td></tr></table></td></tr>
<tr><td>11</td><td>MODE2 $\overline{\text{OUT2}}$</td><td>O</td></tr>
<tr><td>12</td><td>FM $\overline{\text{OUT3}}$</td><td>O</td><td>Tuner band selection output.</td></tr>
<tr><td>13</td><td>SW (MW) $\overline{\text{OUT4}}$</td><td>O</td><td>Tuner band selection output.</td></tr>
<tr><td>14</td><td>MW (LW) $\overline{\text{OUT5}}$</td><td>O</td><td>Tuner band selection output.</td></tr>
<tr><td>15</td><td>LCTR</td><td>I</td><td>IF COUNT for AUTO STOP. AM 450kHz input terminal.</td></tr>
<tr><td>16</td><td>HCTR</td><td>I</td><td>IF COUNT for AUTO STOP. AM 10.7MHz input terminal.</td></tr>
<tr><td>17</td><td>FM $\overline{\text{OUT6}}$</td><td>O</td><td>Tuner band selection output. FM/$\overline{\text{AM}}$</td></tr>
<tr><td>18</td><td>IN</td><td>I</td><td>AM oscillation frequency input.</td></tr>
<tr><td>19</td><td>FM IN</td><td>I</td><td>FM oscillation frequency input.</td></tr>
<tr><td>20</td><td>VCC</td><td>—</td><td>+5V power supply terminal.</td></tr>
<tr><td>21</td><td>PD1</td><td>O</td><td>Tuning voltage control output.</td></tr>
<tr><td>22</td><td>PD2</td><td>—</td><td>Not used.</td></tr>
<tr><td>23</td><td>GND</td><td>—</td><td>GND</td></tr>
<tr><td>24</td><td>XOUT</td><td>O</td><td>Connected to crystal oscillator.</td></tr>
</table>

IC,TMP47C820F – 3392

Pin No.	Pin Name	I/O	Description
1 〜 4	SEG28 〜 SEG31	O	Segment output terminal for LCD1-4. Segment output terminal for LCD.
5 〜 7	COM1 〜 COM3	O	Key matrix input port.
8	COM4	—	Not used.
9	N. C	—	Not used.
10	VLC	I	LCD drive voltage setting. Normal: VSS level (GND)
11	P10	O	Power switch (ON = "H").
12 〜 14	$\overline{\text{P11}}$ 〜 $\overline{\text{P13}}$	O	Key matrix input port.
15	VSS	—	GND
16 〜 19	$\overline{\text{P20}}$ 〜 $\overline{\text{P23}}$	O	Key matrix input port.
20	TEST	—	GND
21	X IN	I	4.19MHzclock oscillation input.
22	X OUT	O	4.19MHz clock oscillation output.
23	$\overline{\text{RESET}}$	I	Reset signal input. ("L" when reset.)
24	$\overline{\text{HOLD}}$	I	Hold signal input. (Not used.)
25 〜 28	$\overline{\text{K00}}$ 〜 $\overline{\text{K03}}$	I	Key matrix input port.
29	$\overline{\text{REMOTE}}$	—	Wireless remote control input. (Not used.)
30	V. DOWN	O	Power VOL DOWN. (Not used.)
31	V. UP	O	Power VOL UP. (Not used.)
32	MUTE	O	Muting output. ("L" when the mute is on.)
33	VDD	—	+5V power supply.
34	D0	I	Tuner data input.
35	D1	O	Tuner data output.
36	CL	O	Tuner data clock.
37 〜 40	BUS0 〜 BUS3	I/O	Send/receive bus line to/from CD processor. (Not used.)
41	BA/CO $\overline{\text{CCE}}$	I/O	Command and data processing control I/O. (Not used.)
42	BUCK	O	Command and data send/receive clock output. (Not used.)
43	$\overline{\text{PU INNER}}$	I	Detects that the pickup is positioned at the most internal cylinder. Most internal cylinder when "L". (+5V)
44	IN SW	I	CD door OPEN/CLOSE detection. CLOSE when "L". (+5V)
45	$\overline{\text{CD}}$	I	Function CD. CD when "L". (+5V)
46	$\overline{\text{TUNER}}$	I	Function TUNER. TUNER when "L".
47	$\overline{\text{CD RESET}}$	I	CD circuit initialize signal input. (Reset when "L".) (+5V)
48	REC	I	Tape recorder REC operation detection signal. (GND)
49	SYNC	O	Tape recorder synchronization stop output. Stop when "L". (Not used.)
50	PLLCE	O	Tuner CE. Controls the tuner PLL IC.
51	X IN	I	32.768kHz clock oscillation input for display.
52	X OUT	O	32.768kHz clock oscillation output for display. (Not used.)
53 〜 61	SEG 0 〜 SEG 8	O	Not used.
62 〜 80	SEG 9 〜 SEG 27	O	Segment output terminal for LCD display.

IC, LC6543H – 4758

Pin No.	Pin Name	I/O	Description
1	DISP REV	I/O	LED output for REV direction.
2	VDD	—	+4.5V-6.0V.
3	S1	—	Not used.
4	S0		
5	$\overline{\text{SCK}}$		
6	KEY DATA3	I	Matrix KEY DATA input terminal.
7	O. KEY SCAN1	O	KEY DATA 0-3 SCAN output.
8	O. KEY SCAN0	O	KEY DATA 0-3 SCAN output.
9	O. REC	O	REC control output. "L" when REC.
10	$\overline{\text{O.SYNC}}$/I – POWER	I/O	CD play request signal output terminal. "L" output when the REC-PLAY condition from the STOP(REC and PAUSE)condition by REC, H- REC(PAUSE)and KEYinput while the FUNC•CD input is "L". Timer standby condition input terminal. Recognizes the standby mode when "L" input, and operates according to the situation which recognizes the standby mode when "H" input is detected(used by I/O).
11	$\overline{\text{I SYNC}}$	I/O	Motor control(deck and mechanical)input terminal while CD dubbing. If "L" input is detected during dubbing, outputs "H" to the motor control output $\overline{\text{O-MOTOR}}$ and stops the motor.
12	$\overline{\text{I RMC}}$	I	Wireless remote controller receiving serial data input terminal.
13	NC	—	Not used.
14	I REEL. PULSE	I	Auto stop detection reel pulse input.

Pin No.	Pin Name	I/O	Description
15	OSC2	—	Not used.
16	OSC1	I	4MHz clock input terminal.
17	TEST	—	LSI test terminal. Normally connect to VSS.
18	VSS	—	Reference voltage for all input and output. 0V.
19	RES	I	Reset input circuit from the external reset input circuit.
20	O-HIGH-SPEED	O	Motor speed control output. "L" output when 2 times speed REC and 2 times speed play back by remote control. "H" output when the mechanical operatese(while the condition is changing).
21	O-MOTOR	O	Motor control output.
22	O-SOL. PLAY	O	Play plunger drive output.
23	O-SOL. FR	O	FF/REW plunger drive output.
24	I-SW. PLY	I	Mechanical PLAY condition detection SW. "L" input when PLAY condition.
25	I-SW. FR	I	Mechanical FF/REW condition detection SW. "L" input when FF/REW condition.
26	I-SW. REA	I	Cassette A side erroneous erase protection claw breaking detection. "H" input when claw is broken.
27	I-SW. REB	I	Cassette B side erroneous erase protection claw breaking detection. "H" input when the claw is broken.
28	I-SW. CAST	I	Cassette in/out detection SW input. "L" input when a cassette is in. Sequential "L" input more than 300mS is recognized as cassette in.
29	DISP PAUSE	O	LED output for PAUSE condition.
30	DISP FWD	O	LED output for FWD direction.

IC,BU3559CK

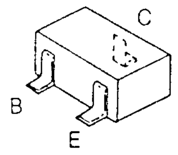
Pin No.	Pin Name	I/O	Description
2	DOLBY	O	Common drive Nch open drain output for the function of the TP LED driver.
3	TAPE MODE	O	Common drive Nch open drain output for the function of the TP LED driver.
4	HI SPEED DUBB	O	Common drive Nch open drain output for the function of the TP LED driver.
5	CD STOP	O	"L" output when CD STOP.
6	NC	O	Not used.
7	NC	O	Not used.
8	NC	O	Not used.
9	HALT	I	Manual HALT input. Setting this terminal to "L" stops oscillating and lessens the current comsumption.
10	OSC2	O	Not used.
11	OSC1	I	4MHz clock input.
12	GND	—	Reference voltage for all input and output. 0V.
13	A GND	—	Reference voltage for the analog circuit. 0V.
14	KEY IN 1	I	CD tray OPEN/CLOSE KEY input.
15	CMP 0	I	Not used.
16	CMP 0	I	Not used.
17	KEY IN 2	I	CD tray SW detection. "H" when SW is OFF.
18	AVDD	—	Power supply connection for the analog circuit of 4.5-5.5v.
19	INIT	I	Manual reset input. "L" when reset and the ROM address is set to 0 address of 0 page.

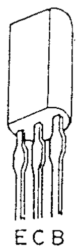
Pin No.	Pin Name	I/O	Description
20	ANALOG SW A	I/O	Function IC input switch output.
21	ANALOG SW B	I/O	
22	MOTOR OPEN	I/O	CD tray motor drive IC input switch output. IN SW ON "L", OFF "H". OUT SW ON "L", OFF "H".
23	MOTOR CLOSE	I/O	
24	IN SW	I	CD tray IN SW detection input.
25	OUT SW	I	CD tray OUT SW detection input.
26	REC	I	Not used.
27	REMOCON IN	I	Remote control signal input terminal.
28	VDD	—	Current of 4.0V-6.0V is connected.
29	MUTE	O	Not used.
30	CD	O	Common drive Nch open drain output for the function of CD LED driver.
31	TUNER	O	Common drive Nch open drain output for the function of TU LED driver.
32	LINE	O	Common drive Nch open drain output for the function of LINE LED driver.
1	TAPE	O	Common drive Nch open drain output for the function of TP LED driver.

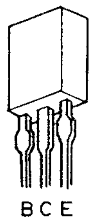
Function	CD	TP	TUNER	LINE
ANALOG SW A	H	L	L	H
ANALOG SW B	L	L	H	H

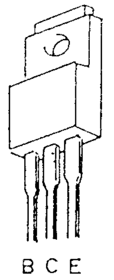
Signal / Input	CD	TUNER	LINE	TAPE
CD	L	H	H	H
TUNER	H	L	H	H
LINE	H	H	L	H
TAPE	H	H	H	L

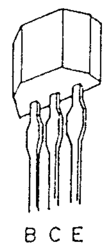
TRANSISTOR ILLUSTRATION











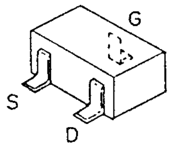
2SA1162 DTA124
2SA1362 DTA143
2SC2712 DTA144EK
2SC2714 DTC114
2SC3265 DTC124XK
DTA114 DTC144

2SA1296
2SA933
2SA952

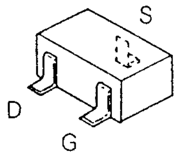
2SB1329

2SB1370

2SC1740
DTA144TS
DTC124XS



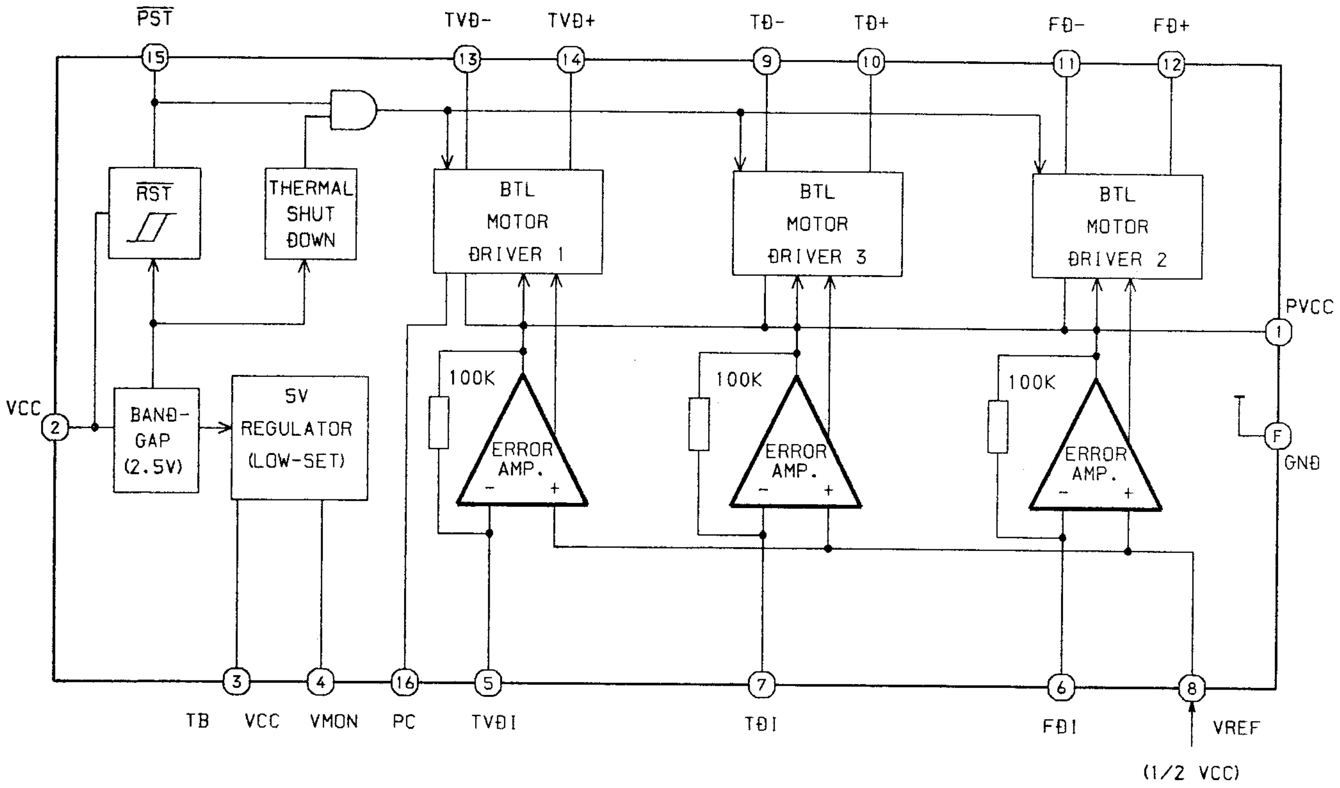
2SJ106
2SK209



2SK211

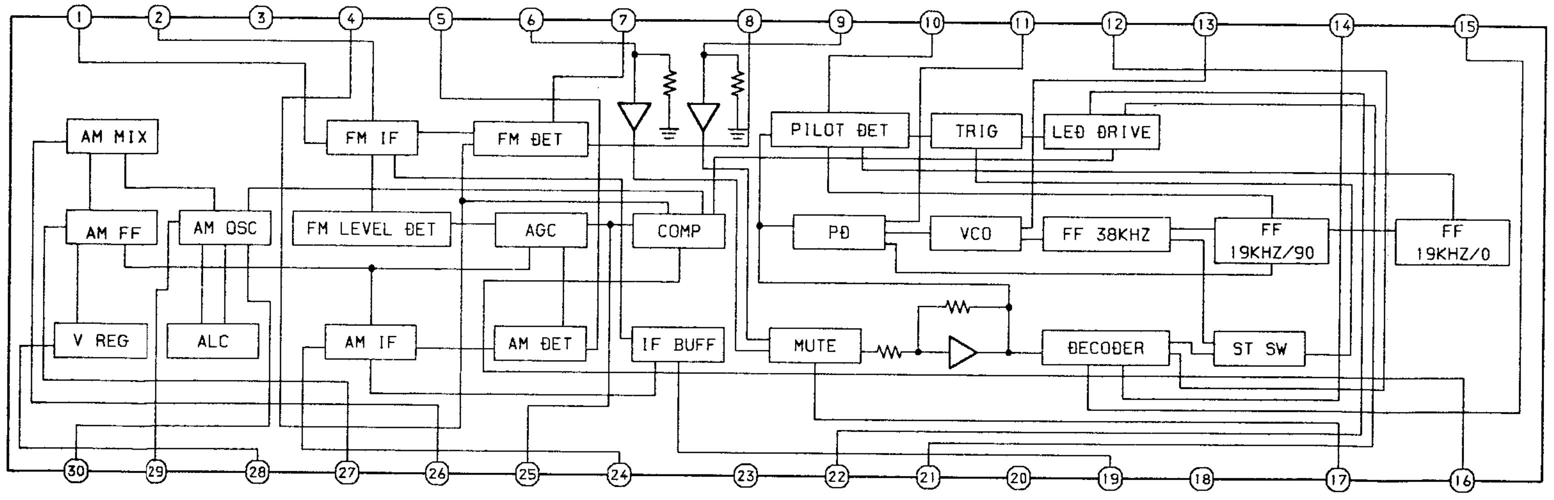
IC BLOCK DIAGRAM

IC,AN8377N



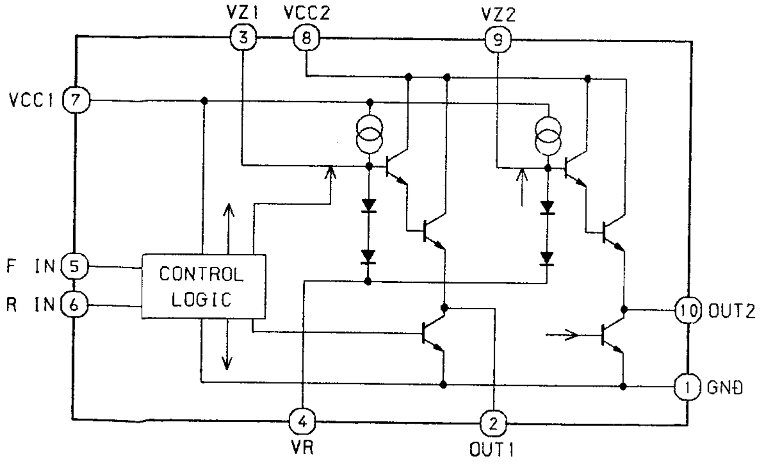
$\overline{PST}$
15
TVD-
13
TVD+
14
TD-
9
TD+
10
FD-
11
FD+
12
$\overline{RST}$
THERMAL SHUT DOWN
BTL MOTOR DRIVER 1
BTL MOTOR DRIVER 3
BTL MOTOR DRIVER 2
PVCC
1
VCC
2
BAND-GAP (2.5V)
5V REGULATOR (LOW-SET)
100K
ERROR AMP.
F
GND
3
4
16
5
7
6
8
TB
VCC
VMON
PC
TVDI
TDI
FDI
VREF
(1/2 VCC)

IC,LA1851N



1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
AM MIX
FM IF
FM DET
PILOT DET
TRIG
LED DRIVE
AM FF
AM OSC
FM LEVEL DET
AGC
COMP
PD
VCO
FF 38KHZ
FF 19KHZ/90
FF 19KHZ/0
V REG
ALC
AM IF
AM DET
IF BUFF
MUTE
DECODER
ST SW
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16

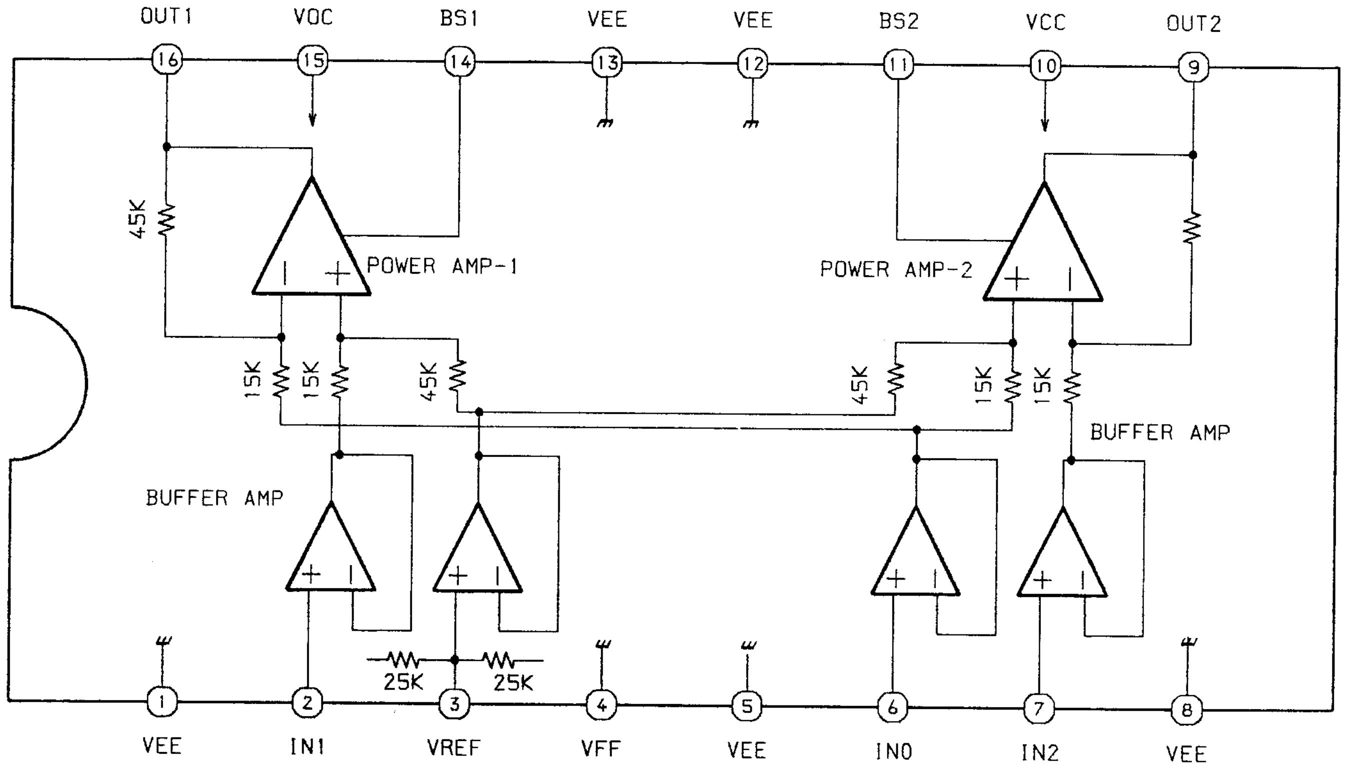
IC,BA6209N



VZ1
3
VCC2
8
VZ2
9
VCC1
7
F IN
5
R IN
6
CONTROL LOGIC
10
OUT2
1
GND
4
VR
2
OUT1

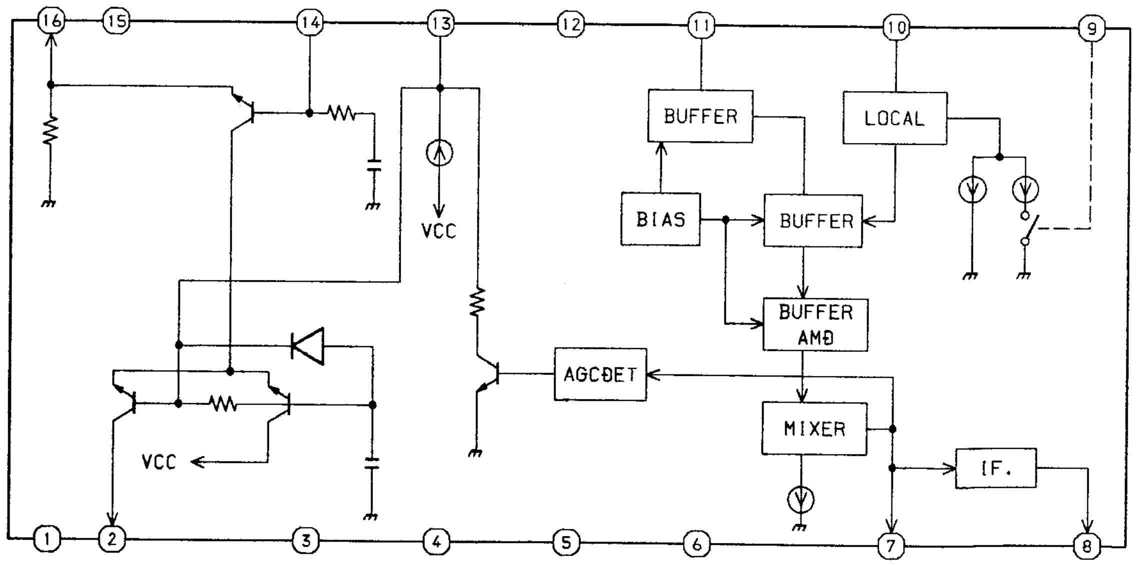
FIN	RIN	VOUT1	VOUT2	NOTES
L	L	L	L	BRAKE
H	L	H	L	CW
L	H	L	H	CCW
H	H	L	L	BRAKE

IC,TA8102P



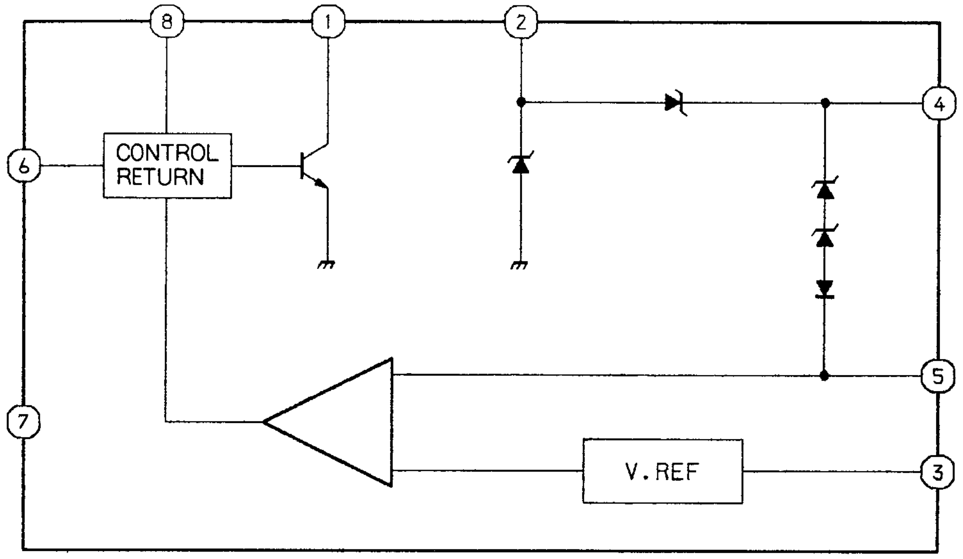
OUT1
16
VOC
15
BS1
14
VEE
13
VEE
12
BS2
11
VCC
10
OUT2
9
45K
15K
POWER AMP-1
POWER AMP-2
BUFFER AMP
BUFFER AMP
25K
25K
1
2
3
4
5
6
7
8
VEE
IN1
VREF
VFF
VEE
IN0
IN2
VEE

IC,TA8176F

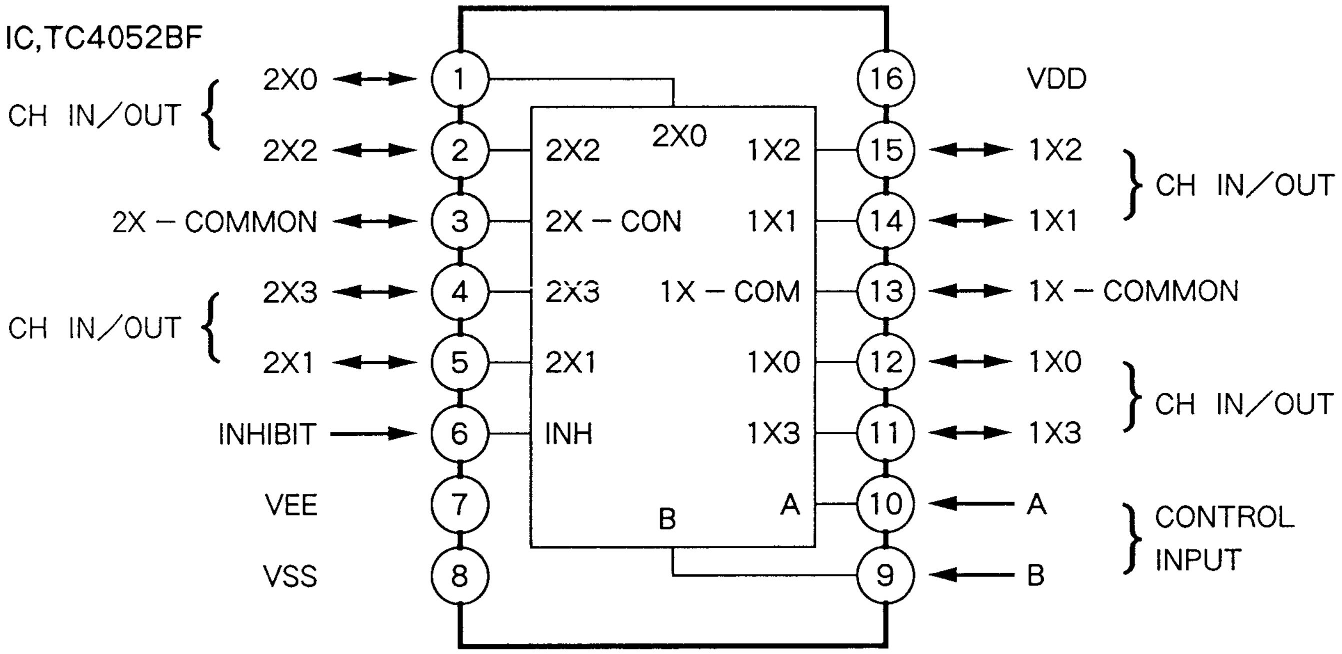


16
15
14
13
12
11
10
9
BUFFER
LOCAL
BIAS
BUFFER
BUFFER AMD
AGCDET
MIXER
IF.
VCC
VCC
1
2
3
4
5
6
7
8

IC,TK11821M


8
1
2
4
6
CONTROL RETURN
7
5
V.REF
3

IC,TC4052BF

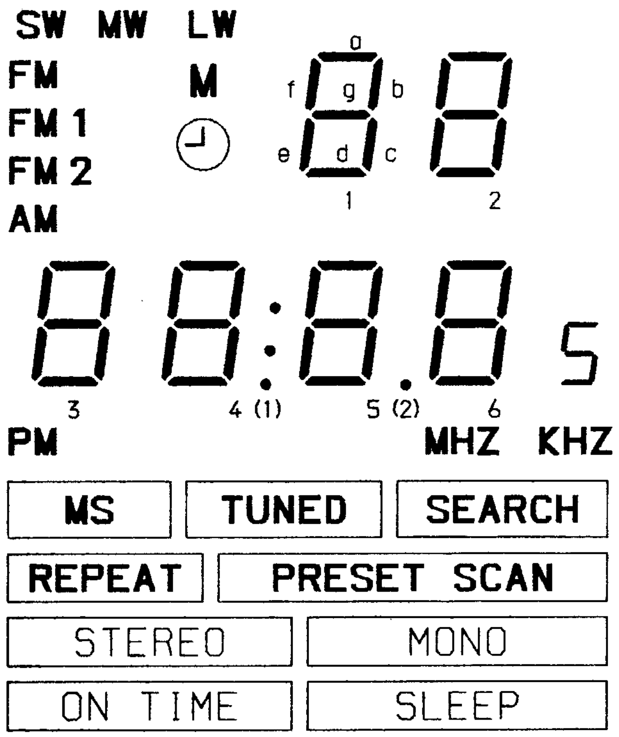

CH IN/OUT
2X0
2X2
2X – COMMON
CH IN/OUT
2X3
2X1
INHIBIT
VEE
VSS
1
2
3
4
5
6
7
8
2X2
2X0
1X2
2X – CON
1X1
2X3
1X – COM
2X1
1X0
INH
1X3
B
A
16
15
14
13
12
11
10
9
VDD
1X2
1X1
CH IN/OUT
1X – COMMON
1X0
1X3
CH IN/OUT
A
B
CONTROL INPUT

The arrow at each pin shows signal in/out.

TRUTH TABLE

INHIBIT INPUT	CONTROL INPUT		SWITCHES BETWEEN CHANNEL INPUT/OUTPUT COMMON PINS			
INHIBIT	B	A	X0	X1	X2	X3
L	L	L	ON	OFF	OFF	OFF
L	L	H	OFF	ON	OFF	OFF
L	H	L	OFF	OFF	ON	OFF
L	H	H	OFF	OFF	OFF	ON
H	X	X	OFF	OFF	OFF	OFF

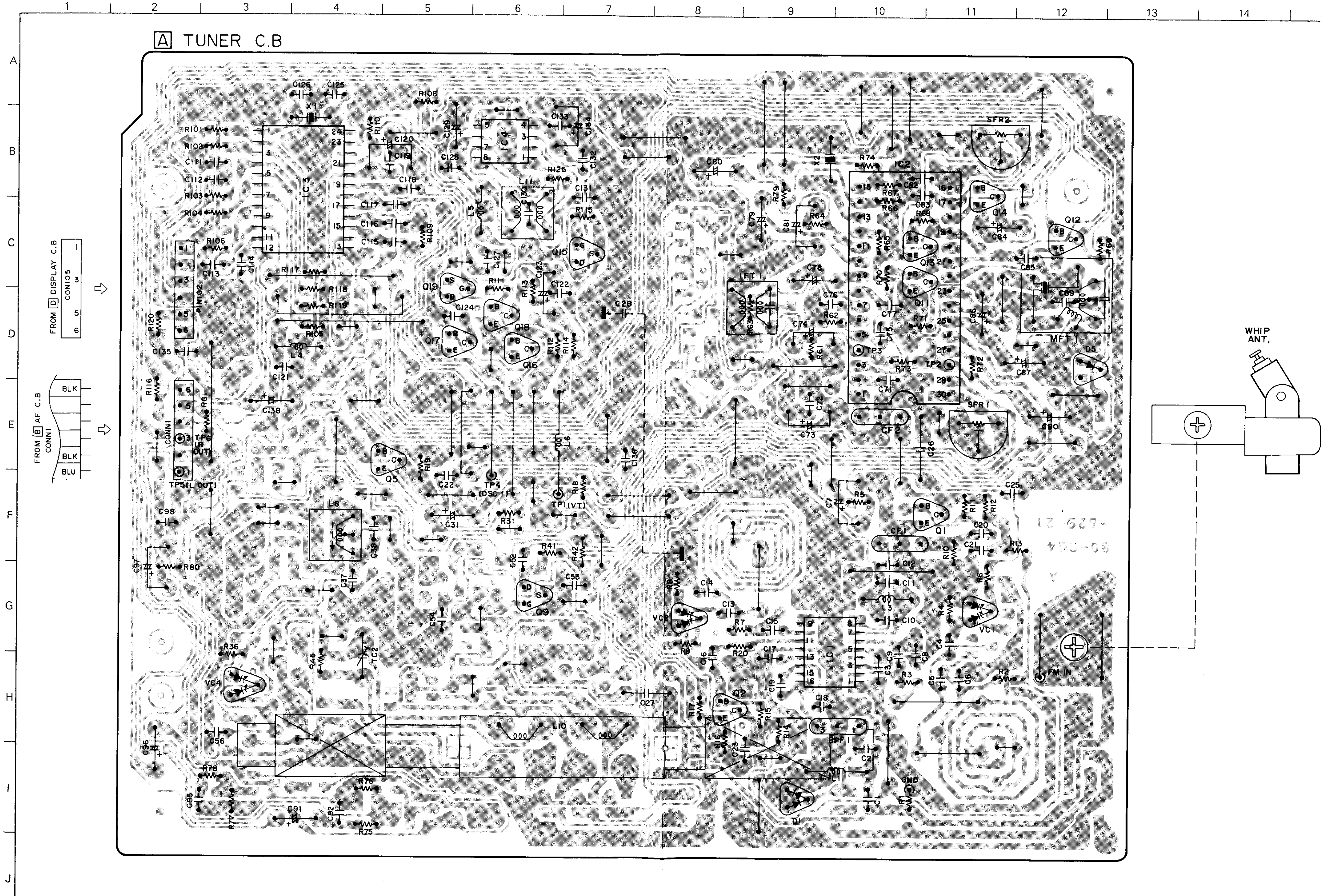
DISPLAY SEGMENT


SW
MW
LW
FM
M
FM 1
FM 2
AM
a
f
g
b
e
d
c
1
2
3
4 (1)
5 (2)
6
PM
MHZ
KHZ
MS
TUNED
SEARCH
REPEAT
PRESET SCAN
STEREO
MONO
ON TIME
SLEEP

HLC8047

NO.	COM.1	COM.2	COM.3
1			COM.3
2		COM.2	
3	COM.1		
4	FM1	AM	FM2
5	◷	3e	3f
6	3d	3g	3a
7	PM	3c	3b
8	:	4e	4f
9	4d	4g	4a
10	• (1)	4c	4b
11	TUNED	MS	SEARCH
12	PRESETSCAN	REPEAT	MONO
13	ON TIME	STEREO	SLEEP
14	M	5e	5f
15	5d	5g	5a
16	• (2)	5c	5b
17	KHZ	MHZ	
18		6e	6f
19	6d	6g	6a
20	S	6c	6b
21	1d	1g	1a
22	SW	1c	1b
23	MW	2e	2f
24	2d	2g	2a
25	LW	2c	2b
26	FM	1e	1f

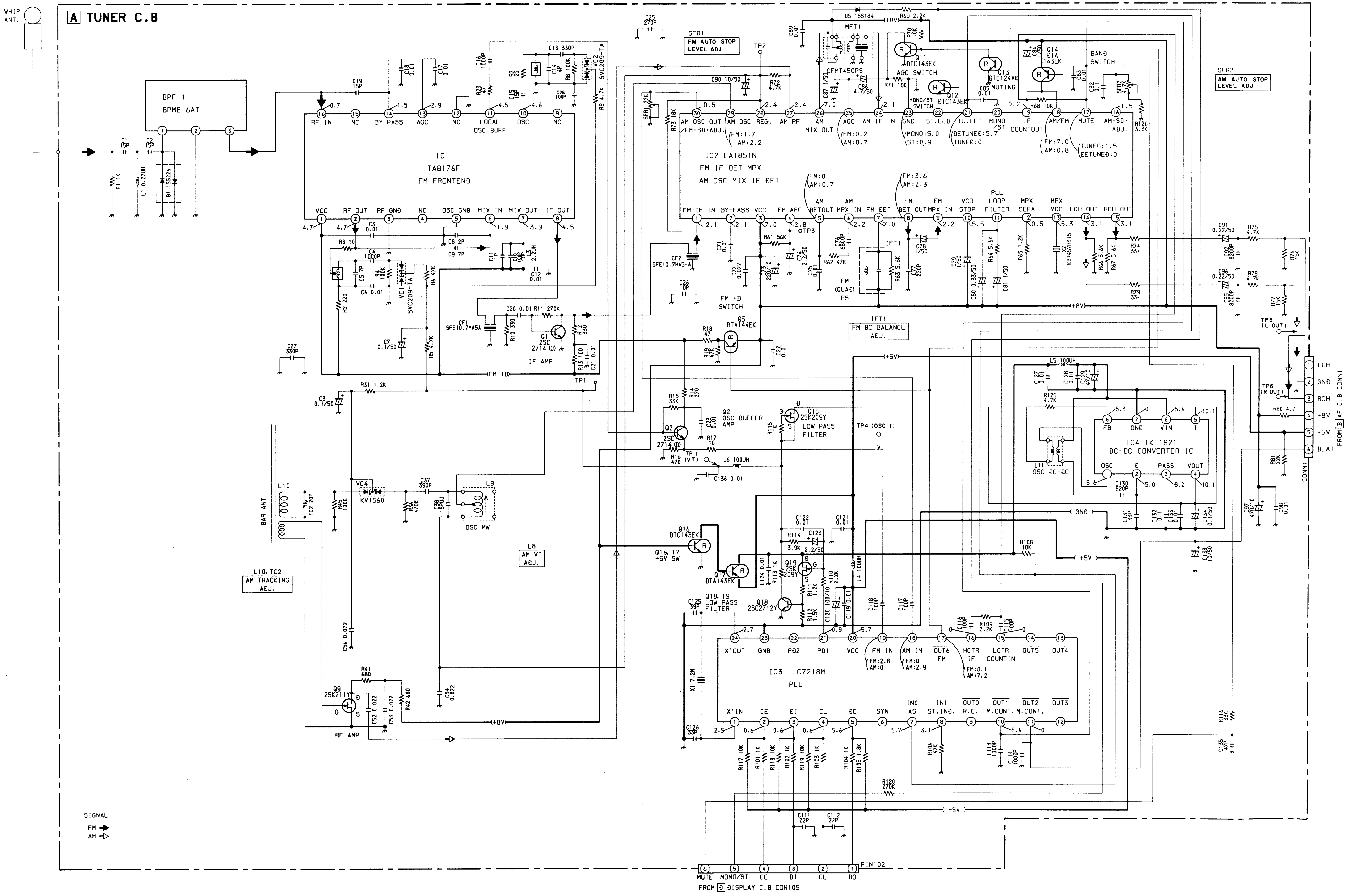
WIRING – 1 < TUNER > (U)


A TUNER C.B
1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
K
FROM D DISPLAY C.B
CON105
1
3
5
6
FROM B AF C.B
CONN1
BLK
BLK
BLU
PIN102
CONN1
TP6 (R OUT)
TP5 (L OUT)
IC1
IC2
IC3
IC4
X1
X2
Q1
Q2
Q5
Q9
Q11
Q12
Q13
Q14
Q15
Q16
Q17
Q18
Q19
L1
L3
L4
L5
L6
L8
L10
L11
IFT1
MFT1
SFR1
SFR2
CF1
CF2
BPF1
VC1
VC2
VC4
TC2
D1
D5
TP1 (VT)
TP2
TP3
TP4 (OSC 1)
GND
FM IN
WHIP ANT.
80-C84-629-21
A

GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.

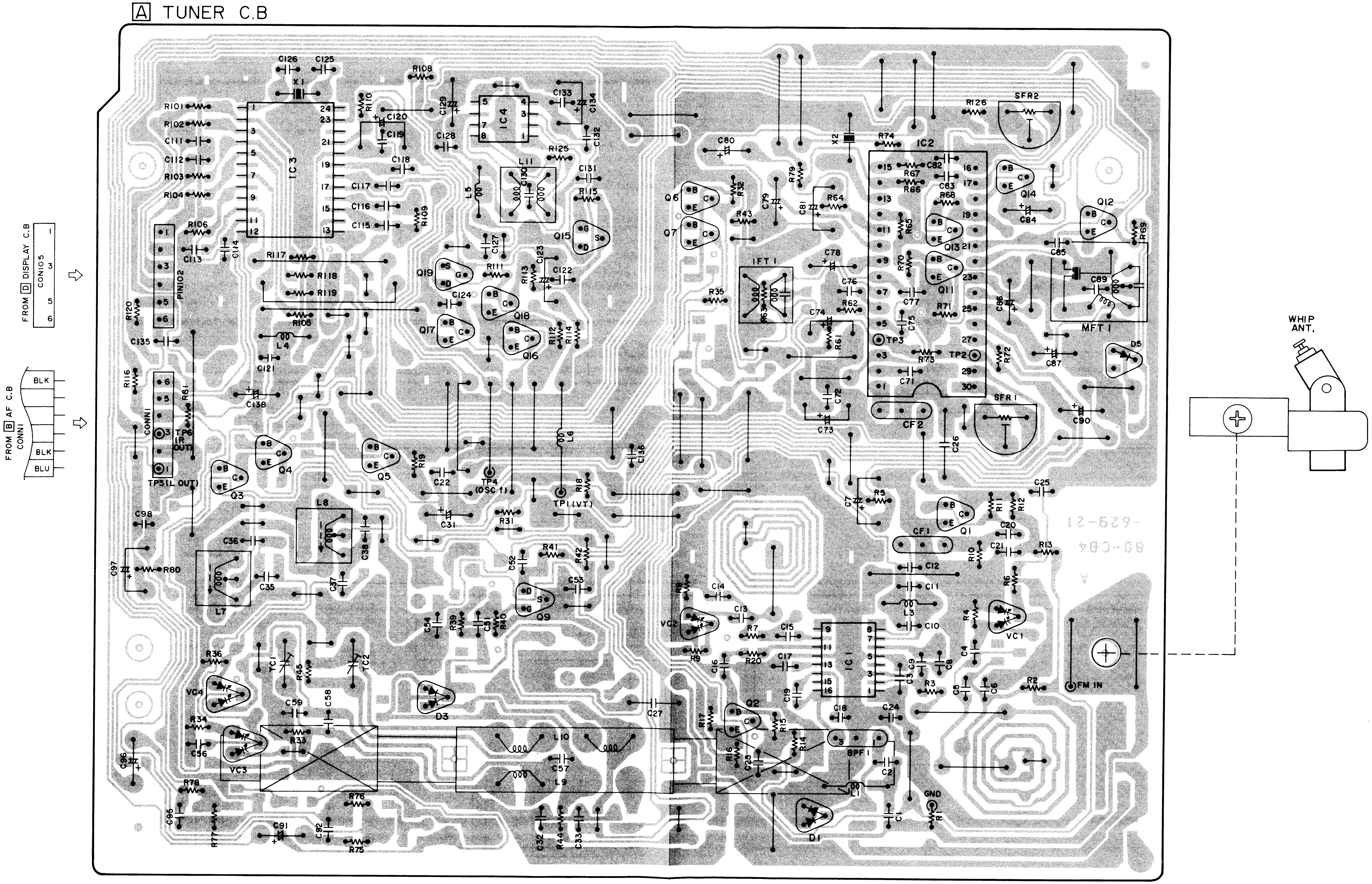
（プリント基板内のケミコンの極性表示は⊖表示です。）

SCHEMATIC DIAGRAM – 1 < TUNER > (U)



A TUNER C.B
WHIP ANT.
BPF 1
BPMB 6AT
IC1
TA8176F
FM FRONTEND
RF IN
NC
BY-PASS
AGC
LOCAL OSC BUFF
OSC
VCC
RF OUT
RF GND
OSC GND
MIX IN
MIX OUT
IF OUT
IC2 LA1851N
FM IF DET MPX
AM OSC MIX IF DET
AM OSC OUT
AM OSC REG.
AM RF
AM MIX OUT
AGC
AM IF IN
GND
ST.LED
TU.LED
MONO /ST
IF COUNTOUT
AM/FM
MUTE
AM·SD·ADJ.
FM IF IN
FM AFC
AM DETOUT
AM MPX IN
FM DET
FM DET OUT
FM MPX IN
VCO STOP
PLL LOOP FILTER
MPX SEPA
MPX VCO
LCH OUT
RCH OUT
SFR1
FM AUTO STOP LEVEL ADJ
SFR2
AM AUTO STOP LEVEL ADJ
TP1
TP2
TP3
TP4 (OSC f)
TP5 (L OUT)
TP6 (R OUT)
MFT1
CFMT450PS
Q11 DTC143EK
AGC SWITCH
Q12 DTC143EK
MONO/ST SWITCH
Q13 DTC124XK
MUTING
Q14 DTA143EK
BAND SWITCH
CF1 SFE10.7MA5A
CF2 SFE10.7MA5-A
Q1 2SC2714 (O)
IF AMP
Q5 DTA144EK
FM +B SWITCH
IFT1
FM DC BALANCE ADJ.
FM (QUAD) PS
Q2 2SC2714 (O)
OSC BUFFER AMP
Q15 2SK209Y
LOW PASS FILTER
L6 100UH
L5 100UH
IC4 TK11821
DC-DC CONVERTER IC
FB
GND
VIN
T
OSC
D
PASS
VOUT
L11 OSC DC-DC
L10
BAR ANT
VC4 KV1560
OSC MW
L8 AM VT ADJ.
L10, TC2 AM TRACKING ADJ.
Q16 DTC143EK
Q16, 17 +5V SW
Q17 DTA143EK
Q18, 19 LOW PASS FILTER
Q18 2SC2712Y
Q19 2SK209Y
Q9 2SK211Y
RF AMP
IC3 LC7218M
PLL
X'OUT
GND
PD2
PD1
VCC
FM IN
AM IN
OUT6 FM
HCTR IF
LCTR COUNTIN
OUT5
OUT4
X'IN
CE
DI
CL
DO
SYN
IN0 AS
IN1 ST.IND.
OUT0 R.C.
OUT1 M.CONT.
OUT2 M.CONT.
OUT3
X1 7.2M
CONN1
LCH
GND
RCH
+8V
+5V
BEAT
FROM B AF C.B CONN1
PIN102
MUTE
MONO/ST
CE
DI
CL
DO
FROM D DISPLAY C.B CON105
SIGNAL
FM
AM

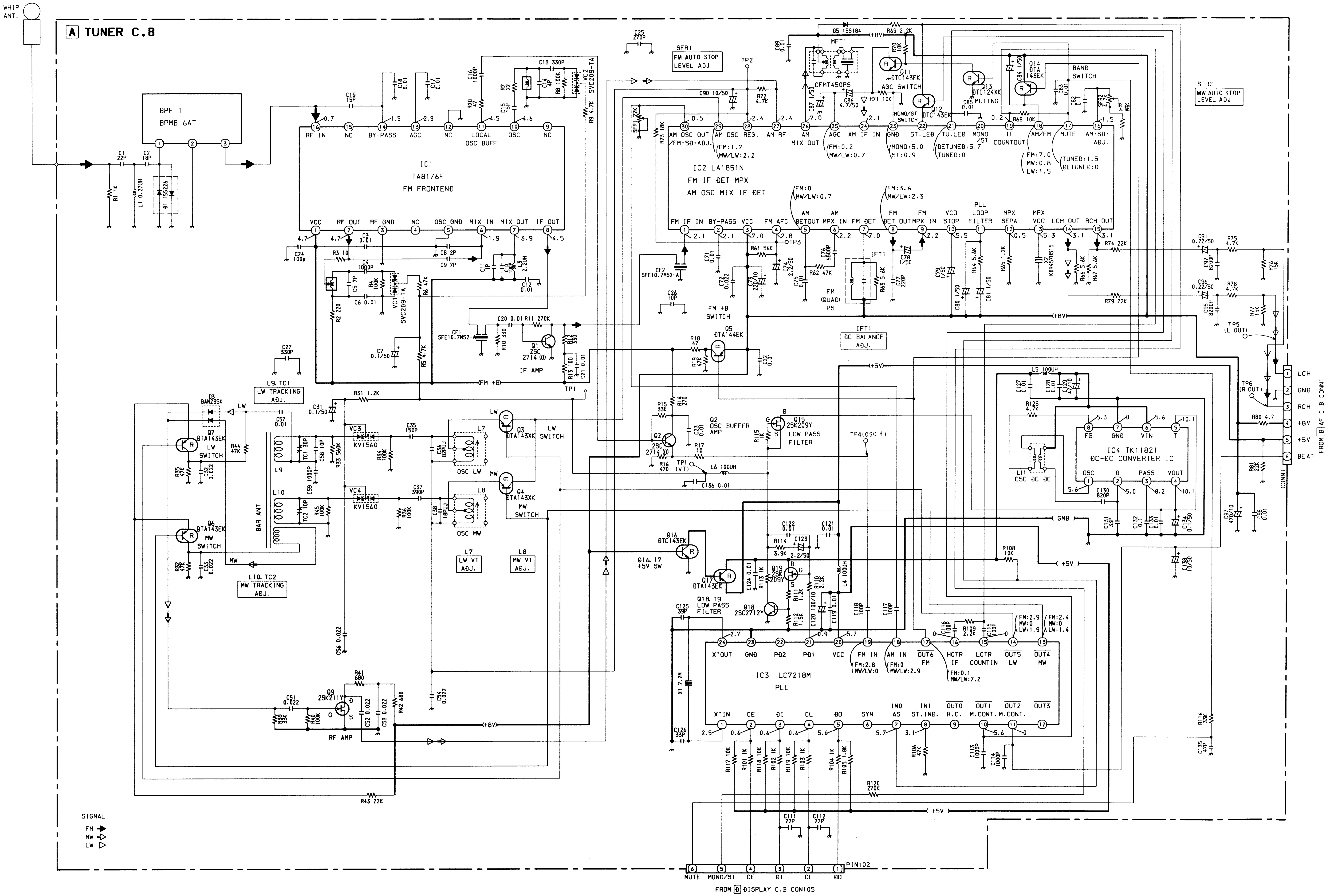
WIRING – 2 < TUNER > (E, K, Z)


A TUNER C.B
FROM D DISPLAY C.B CON105
FROM B AF C.B CONN1
BLK
BLK
BLU
PIN102
CONN1
TP6 (R OUT)
TP5 (L OUT)
TP4 (OSC 1)
TP1 (VT)
TP2
TP3
IC1
IC2
IC3
IC4
X1
X2
IFT1
MFT1
SFR1
SFR2
CF1
CF2
BPF1
L1
L3
L4
L5
L6
L7
L8
L9
L10
L11
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q9
Q11
Q12
Q13
Q14
Q15
Q16
Q17
Q18
Q19
D1
D3
D5
VC1
VC2
VC3
VC4
TC1
TC2
FM IN
GND
WHIP ANT.
80-CD4-629-21

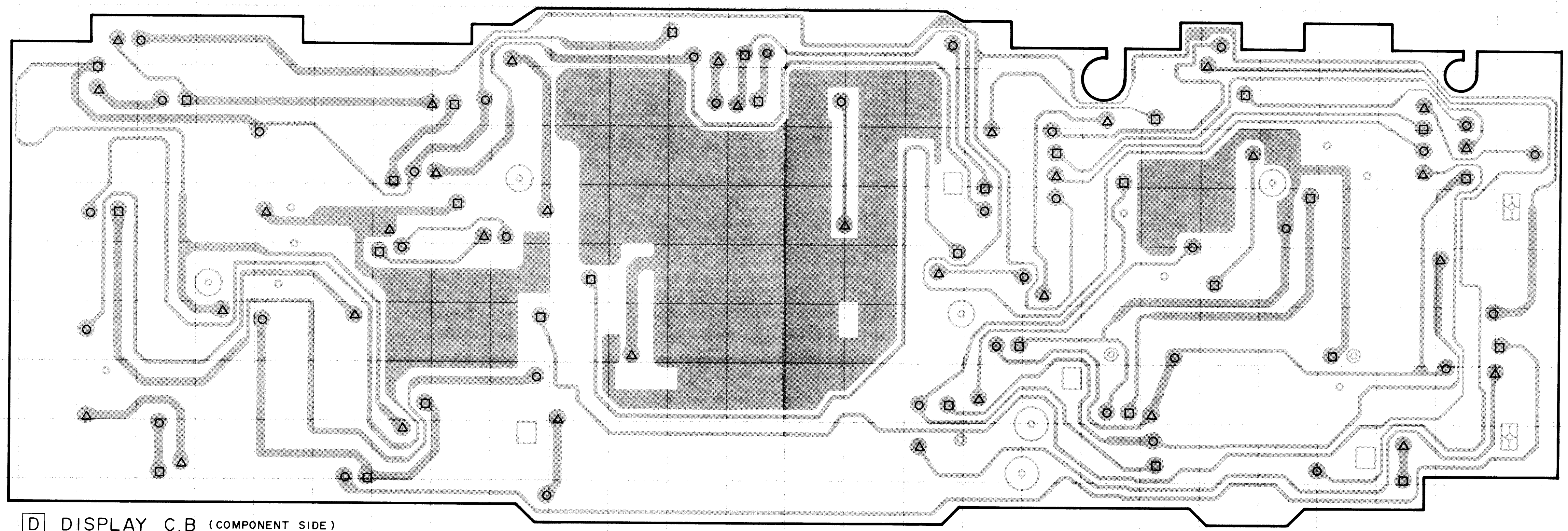
GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.

（プリント基板内のケミコンの極性表示はΘ表示です。）

SCHEMATIC DIAGRAM – 2 < TUNER > (E, K, Z)

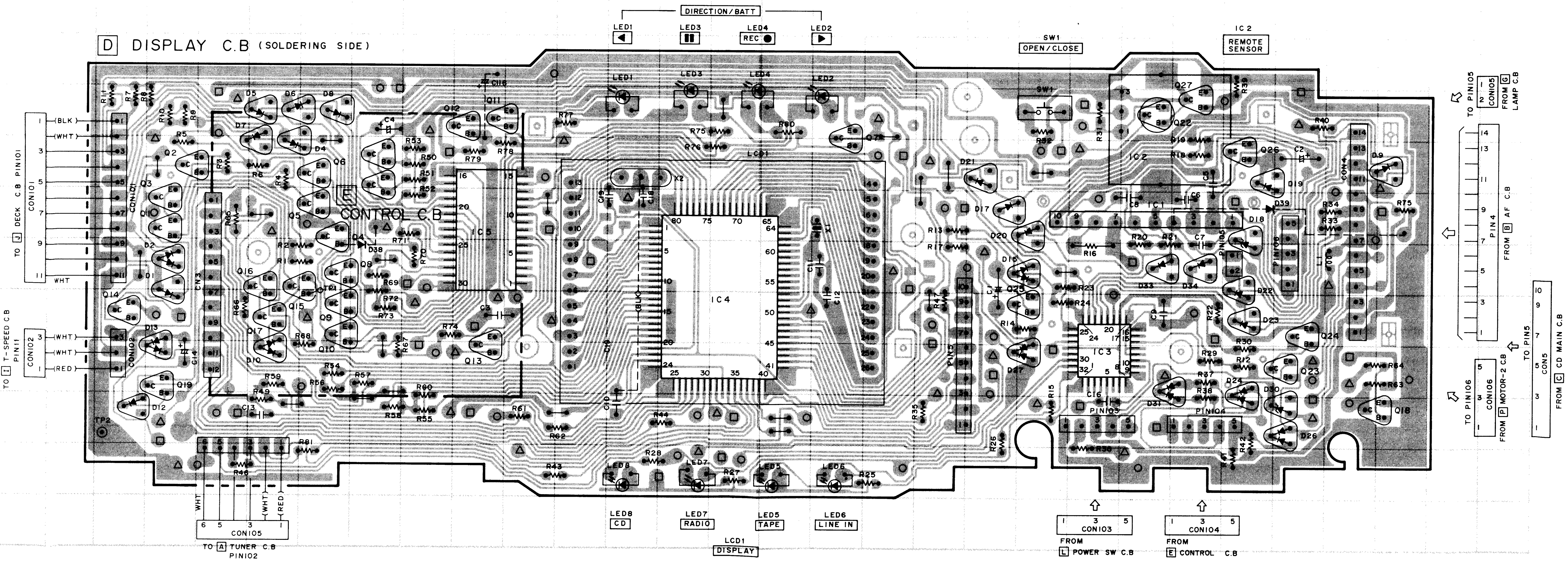

WHIP ANT.
A TUNER C.B
BPF 1
BPMB 6AT
C1 22P
C2 18P
R1 1K
L1 0.27UH
D1 1SS226
IC1
TA8176F
FM FRONTEND
RF IN
NC
BY-PASS
AGC
LOCAL OSC BUFF
OSC
VCC
RF OUT
RF GND
OSC GND
MIX IN
MIX OUT
IF OUT
C13 330P
VC2 SVC209-TA
VC1 SVC209-TA
CF1 SFE10.7MS2-A
CF2 SFE10.7MS2-A
Q1 2SC2714 (O)
IF AMP
TP1
FM +B
SFR1
FM AUTO STOP LEVEL ADJ
TP2
MFT1
CFMT450PS
IC2 LA1851N
FM IF DET MPX
AM OSC MIX IF DET
AM OSC OUT /FM·SD·ADJ.
AM OSC REG.
AM RF
AM MIX OUT
AGC
AM IF IN
GND
ST.LED
TU.LED
MONO /ST
IF COUNTOUT
AM/FM
MUTE
AM·SD·ADJ.
FM IF IN
FM AFC
AM DETOUT
AM MPX IN
FM DET
FM DET OUT
FM MPX IN
VCO STOP
PLL LOOP FILTER
MPX SEPA
MPX VCO
LCH OUT
RCH OUT
Q11 DTC143EK
AGC SWITCH
Q12 DTC143EK
MONO/ST SWITCH
Q13 DTC124XK
MUTING
Q14 DTA143EK
BAND SWITCH
SFR2
MW AUTO STOP LEVEL ADJ
IFT1
DC BALANCE ADJ.
FM (QUAD) PS
X2 KBR457M515
Q5 DTA144EK
FM +B SWITCH
TP3
TP5 (L OUT)
TP6 (R OUT)
LCH
GND
RCH
+8V
+5V
BEAT
CONN1
FROM B AF C.B CONN1
L5 100UH
IC4 TK11821
DC-DC CONVERTER IC
FB
GND
VIN
T
OSC
D
PASS
VOUT
L11 OSC DC-DC
Q2 2SC2714 (O)
OSC BUFFER AMP
Q15 2SK209Y
LOW PASS FILTER
TP4 (OSC f)
L6 100UH
TP1 (VT)
L9, TC1
LW TRACKING ADJ.
D3 DAN235K
Q7 DTA143EK
LW SWITCH
Q6 DTA143EK
MW SWITCH
VC3 KV1560
VC4 KV1560
L9
L10
BAR ANT
L10, TC2
MW TRACKING ADJ.
L7
OSC LW
L8
OSC MW
Q3 DTA143XK
LW SWITCH
Q4 DTA143XK
MW SWITCH
L7
LW VT ADJ.
L8
MW VT ADJ.
Q9 2SK211Y
RF AMP
R43 22K
Q16 DTC143EK
Q17 DTA143EK
Q16, 17 +5V SW
Q18, 19 LOW PASS FILTER
Q18 2SC2712Y
Q19 2SK209Y
L4 100UH
X1 7.2M
IC3 LC7218M
PLL
X'OUT
GND
PD2
PD1
VCC
FM IN
AM IN
OUT6 FM
HCTR IF
LCTR COUNTIN
OUT5 LW
OUT4 MW
X'IN
CE
DI
CL
DO
SYN
IN0 AS
IN1 ST.IND.
OUT0 R.C.
OUT1 M.CONT.
OUT2 M.CONT.
OUT3
PIN102
MUTE
MONO/ST
CE
DI
CL
DO
FROM D DISPLAY C.B CON105
SIGNAL
FM
MW
LW

WIRING – 3 < DISPLAY >

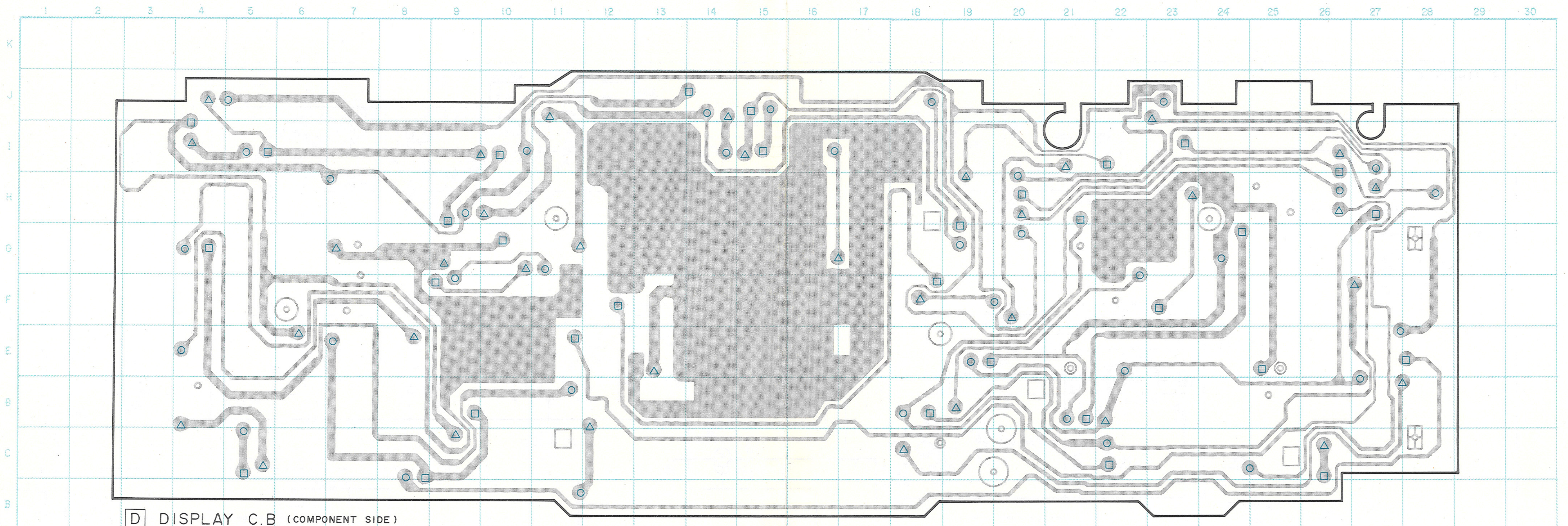


D DISPLAY C.B (COMPONENT SIDE)

D DISPLAY C.B (SOLDERING SIDE)

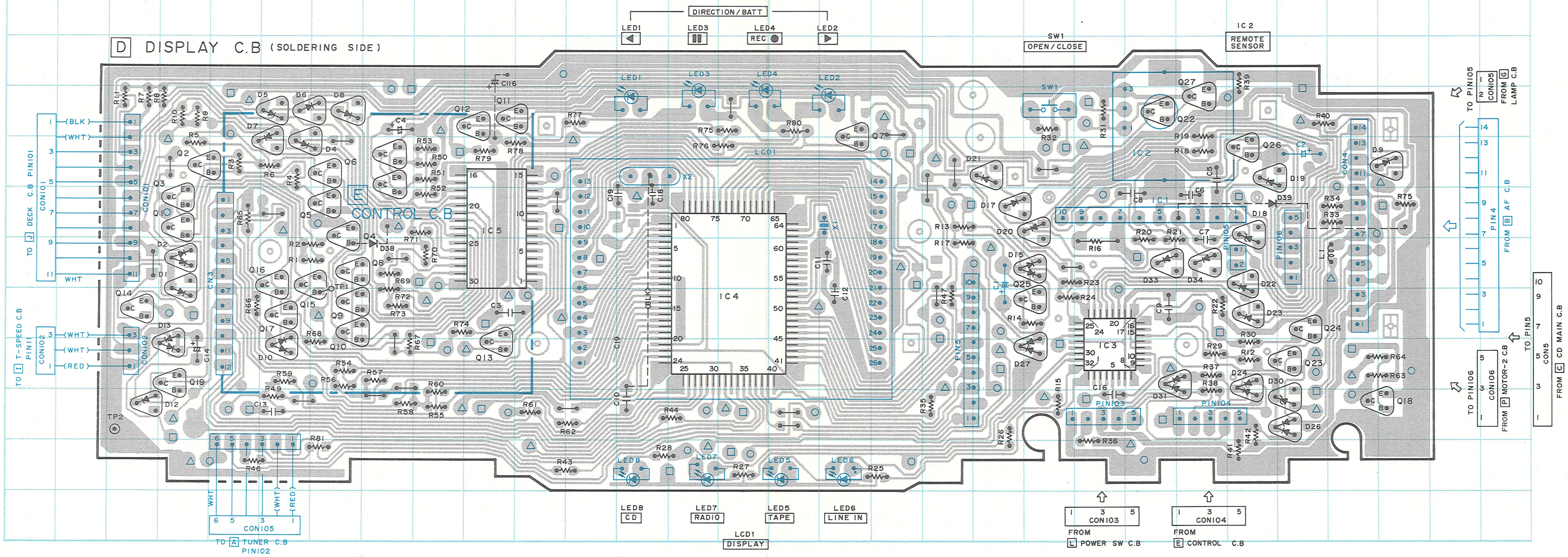

DIRECTION/BATT
LED1 ◀
LED3 ❚❚
LED4 REC ●
LED2 ▶
SW1 OPEN/CLOSE
IC2 REMOTE SENSOR
TO J DECK C.B PIN101
CON101
(BLK)
(WHT)
WHT
TO I T-SPEED C.B PIN11
CON102
(WHT)
(WHT)
(RED)
E CONTROL C.B
IC5
IC4
IC3
IC1
IC2
LCD1
CN3
CON4
TP2
TO PIN105 CON105 FROM G LAMP C.B
PIN4 FROM B AF C.B
TO PIN5 CON5 FROM C CD MAIN C.B
TO PIN106 CON106 FROM P MOTOR-2 C.B
PIN103
PIN104
WHT
(WHT)
(RED)
CON105
TO A TUNER C.B PIN102
LED8 CD
LED7 RADIO
LED5 TAPE
LED6 LINE IN
LCD1 DISPLAY
CON103 FROM L POWER SW C.B
CON104 FROM E CONTROL C.B

WIRING – 3 < DISPLAY >



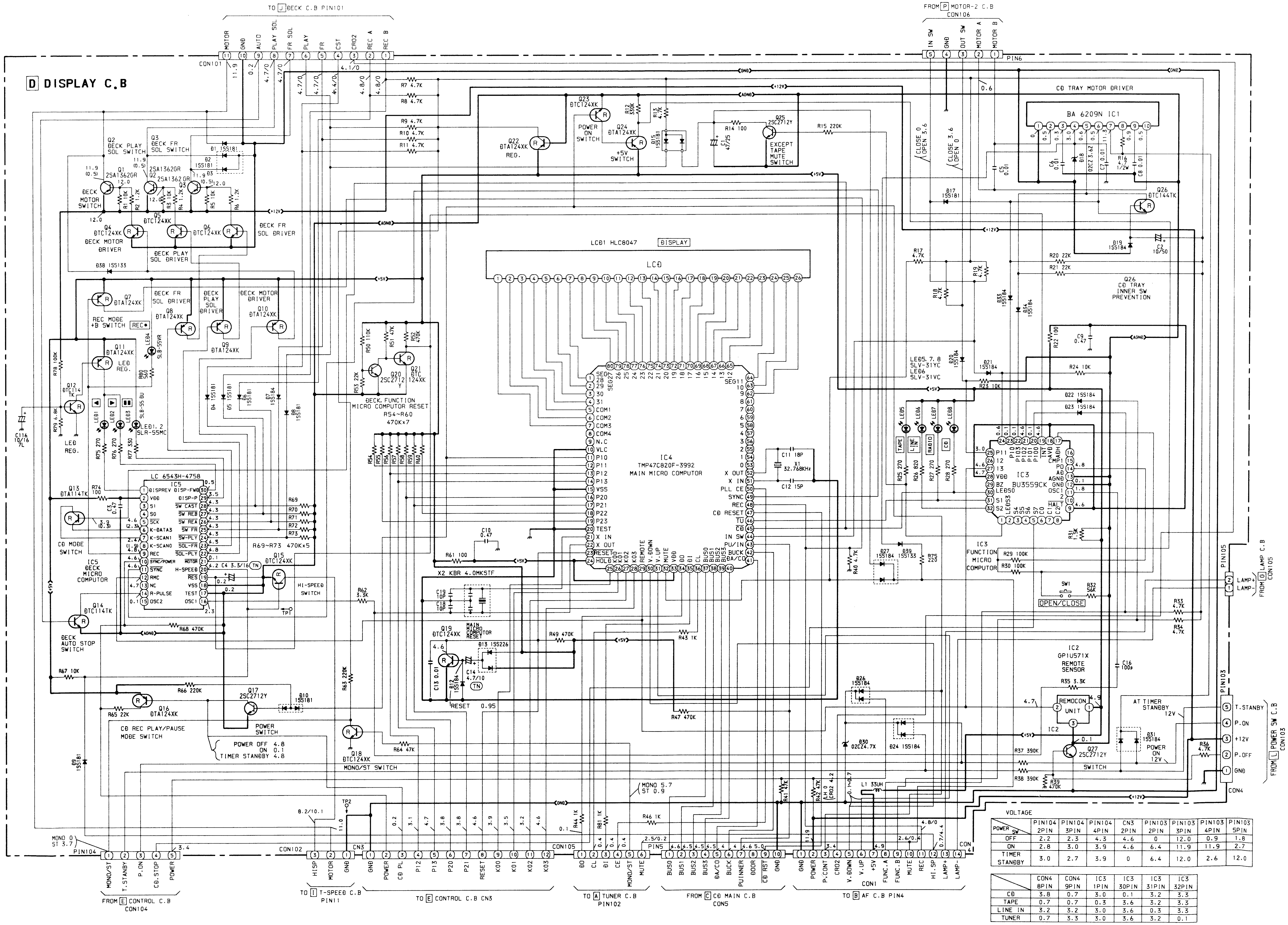
D DISPLAY C.B (COMPONENT SIDE)

D DISPLAY C.B (SOLDERING SIDE)



DIRECTION / BATT
LED1
LED3
LED4 REC ●
LED2
SW1 OPEN / CLOSE
IC2 REMOTE SENSOR
TO J DECK C.B PIN101
CON101
1 (BLK)
(WHT)
3
5
7
9
11 WHT
TO I T-SPEED C.B PIN11
CON102
3 (WHT)
(WHT)
1 (RED)
TP2
E CONTROL C.B
IC5
IC4
LCD1
IC3
IC2
SW1
X1
X2
CN3
CON4
PIN105
PIN106
PIN103
PIN104
TO PIN105 CON105 2 1 FROM G LAMP C.B
PIN4 FROM B AF C.B 14 13 11 9 7 5 3 1
TO PIN106 CON106 5 3 1 FROM P MOTOR-2 C.B
TO PIN5 CON5 10 9 7 5 3 1 FROM C CD MAIN C.B
6 5 3 1 CON105 WHT (WHT) (RED)
TO A TUNER C.B PIN102
LED8 CD
LED7 RADIO
LED5 TAPE
LED6 LINE IN
LCD1 DISPLAY
1 3 5 CON103 FROM L POWER SW C.B
1 3 5 CON104 FROM E CONTROL C.B

SCHEMATIC DIAGRAM – 3 < DISPLAY >

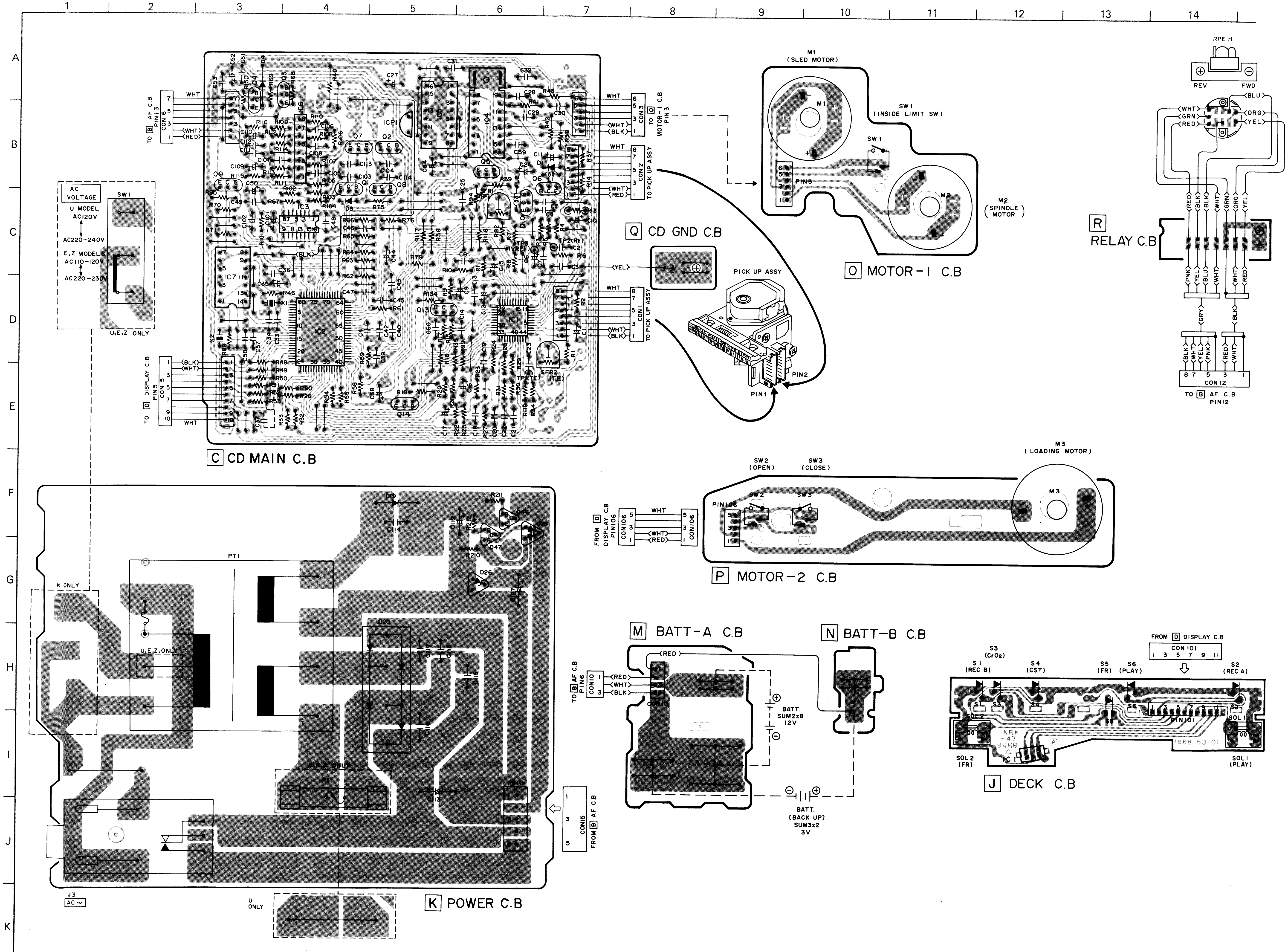

TO J DECK C.B PIN101
MOTOR
GND
AUTO
PLAY SOL
FR SOL
PLAY
FR
CST
CRO2
REC A
REC B
CON101
D DISPLAY C.B
FROM P MOTOR-2 C.B CON106
IN SW
GND
OUT SW
MOTOR A
MOTOR B
PIN6
CD TRAY MOTOR DRIVER
BA 6209N IC1
Q2 DECK PLAY SOL SWITCH
Q3 DECK FR SOL SWITCH
Q1 2SA1362GR
Q2 2SA1362GR
Q3 2SA1362GR
DECK MOTOR SWITCH
D1 1SS181
D2 1SS181
D3
Q4 DTC124XK
Q5 DTC124XK
Q6 DTC124XK
DECK MOTOR DRIVER
DECK PLAY SOL DRIVER
DECK FR SOL DRIVER
Q23 DTC124XK
POWER ON SWITCH
Q24 DTA124XK
+5V SWITCH
Q22 DTA124XK REG.
D15 1SS181
Q25 2SC2712Y
EXCEPT TAPE MUTE SWITCH
R15 220K
R14 100
C1 47/25
R12 330K
R13 4.7K
CLOSE 0 OPEN 3.6
CLOSE 3.6 OPEN 0
C5 0.01
C6 0.01
D18 02CZ 3.6Z
C7 0.01
R16 4.7 1/2W
C8 0.01
D17 1SS181
Q26 DTC144TK
D19 1SS184
C2 10/50
R17 4.7K
R19 4.7K
R18 4.7K
R20 22K
R21 22K
Q26 CD TRAY INNER SW PREVENTION
D33 1SS184
D34 1SS184
LCD1 HLC8047
DISPLAY
LCD
D38 1SS133
Q7 DTA124XK
REC MODE +B SWITCH
REC●
DECK FR SOL DRIVER
Q8 DTA124XK
DECK PLAY SOL DRIVER
Q9 DTA124XK
DECK MOTOR DRIVER
Q10 DTA124XK
Q11 DTA124XK
LED REG.
LED4 SLB-55VR
LED1 LED2 LED3
SLB-55 BU
LED1, 2 SLR-55MC
R78 100K
Q12 DTC114TK
R79 6.8K
C116 10/16 7L
LED REG.
R75 270
R76 270
R77 330
R80 560
R50 110K
R51 47K
R52 470K
R53 22K
Q20 2SC2712Y
Q21 DTC124XK
DECK FUNCTION MICRO COMPUTER RESET
R54~R60 470K×7
D4 1SS181
D5 1SS181
D6 1SS181
D7 1SS184
D8 1SS181
IC5 LC 6543H-4758
DISPREV
VDD
SI
SO
SCK
K-DATA3
K-SCAN1
K-SCAN0
REC
SYNC/POWER
SYNC
RMC
NC
R-PULSE
OSC2
DISP-FWD
DISP-P
SW CAST
SW REB
SW REA
SW FR
SW PLY
SOL-FR
SOL-PLY
MOTOR
H-SPEED
RES
VSS
TEST
OSC1
Q13 DTA114TK
R74 100
C3 0.47
CD MODE SWITCH
IC5 DECK MICRO COMPUTOR
R69~R73 470K×5
C4 3.3/16 (TN)
Q15 DTC124XK
HI-SPEED SWITCH
TP1
Q14 DTC114TK
DECK AUTO STOP SWITCH
R68 470K
R62 3.3K
R67 10K
R66 220K
Q17 2SC2712Y
D10 1SS181
R65 22K
Q16 DTA124XK
POWER SWITCH
CD REC PLAY/PAUSE MODE SWITCH
POWER OFF 4.8
ON 0.1
TIMER STANDBY 4.8
D9 1SS181
R63 220K
Q18 DTC124XK
MONO/ST SWITCH
R64 47K
IC4 TMP47C820F-3992 MAIN MICRO COMPUTOR
C10 0.47
R61 100
X2 KBR 4.0MKSTF
C19 10P
C18 10P
Q19 DTC124XK MAIN MICRO COMPUTOR RESET
D13 1SS226
C13 0.01
D12 1SS184
C14 4.7/10 (TN)
RESET 0.95
R49 470K
R43 1K
R47 470K
C11 18P
X1 32.768KHz
C12 15P
LED5, 7, 8 SLV-31YC
LED6 SLV-31VC
D20 1SS184
D21 1SS184
R23 10K
R22 10K
C9 0.47
R24 10K
D22 1SS184
D23 1SS184
LED5 LED6 LED7 LED8
TAPE
LINE
RADIO
CD
R25 270
R26 820
R27 270
R28 270
IC3 BU3559CK
R31 1.5K
IC3 FUNCTION MICRO COMPUTOR
R29 100K
R30 100K
D27 1SS184
D39 1SS133
R75 220
R40 4.7K
SW1
R32 56K
OPEN/CLOSE
R33 4.7K
R34 4.7K
PIN105
LAMP+
LAMP-
FROM G LAMP C.B CON105
IC2 GP1U571X REMOTE SENSOR
C16 100p
R35 3.3K
REMOCON UNIT
D26 1SS184
D30 02CZ4.7X
D24 1SS184
Q27 2SC2712Y SWITCH
R37 390K
R38 390K
R39 470K
AT TIMER STANDBY 12V
D31 1SS184
POWER ON 12V
R36 4.7K
PIN103
T.STANBY
P.ON
+12V
P.OFF
GND
CON4
FROM L POWER SW C.B CON103
L1 33UH
R41
R42 47K
R44 1K
R81 1K
R46 1K
MONO 5.7 ST 0.9
TP2
MONO 0 ST 3.7
PIN104
MONO/ST
T.STANBY
P.ON
CD.STOP
POWER
FROM E CONTROL C.B CON104
CON102
HISP
MOTOR
GND
TO I T-SPEED C.B PIN11
CN3
GND
POWER
CD PL
P12
P13
P20
P21
RESET
K00
K01
K02
K03
TO E CONTROL C.B CN3
CON105
DO
CL
DI
CE
MONO/ST
MUTE
TO A TUNER C.B PIN102
PIN5
BUS0
BUS1
BUS2
BUS3
DA/CD
BUCK
PUINNER
DOOR
CD RST
GND
FROM C CD MAIN C.B CON5
CON1
POWER
P.CONT
CRO2
V.DOWN
V.UP
+5V
FUNC.A
FUNC.B
MUTE
REC
HI.SP
LAMP+
LAMP-
TO B AF C.B PIN4

VOLTAGE

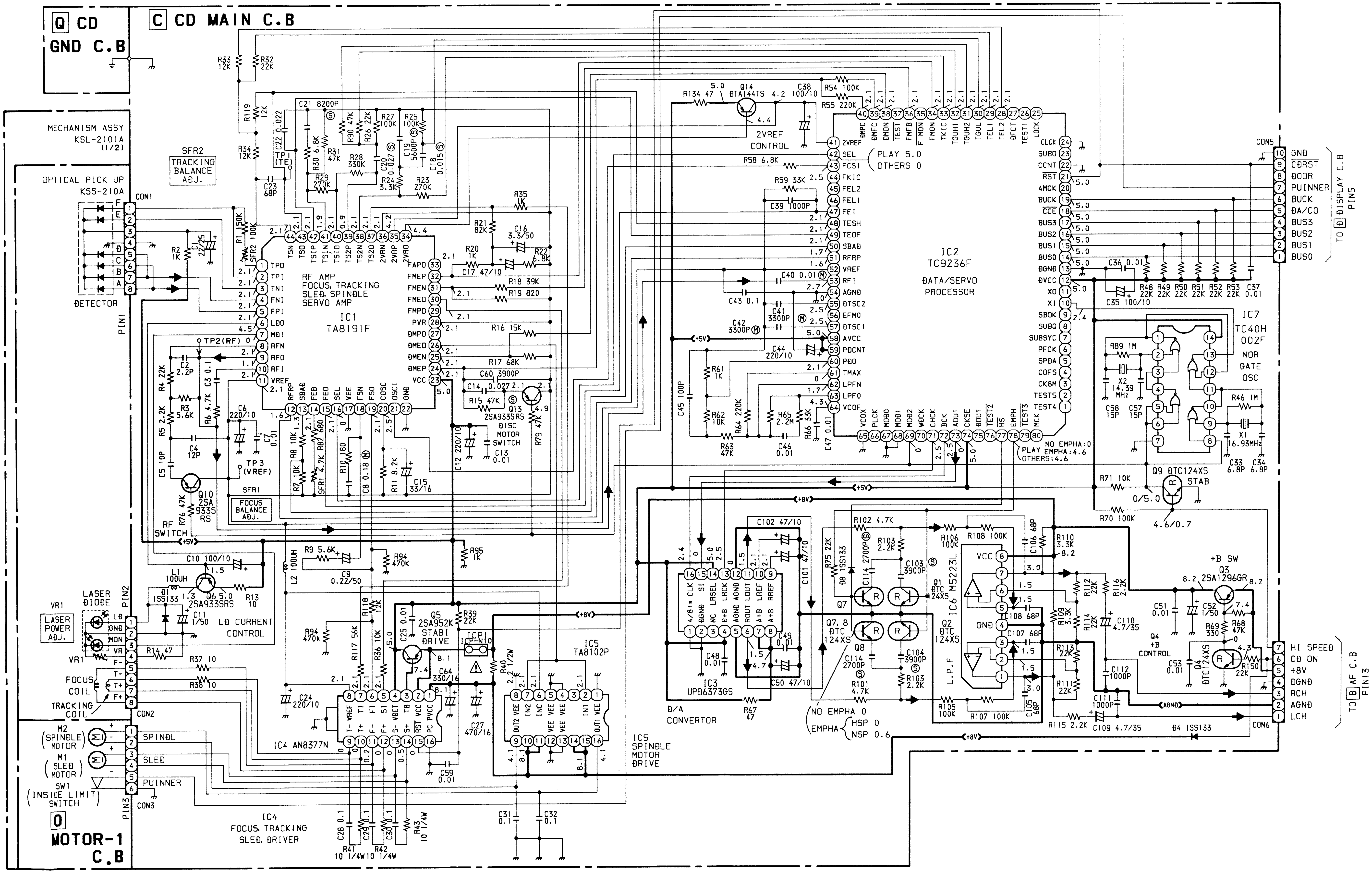
POWER SW	PIN104 2PIN	PIN104 3PIN	PIN104 4PIN	CN3 2PIN	PIN103 2PIN	PIN103 3PIN	PIN103 4PIN	PIN103 5PIN
OFF	2.2	2.3	4.3	4.6	0	12.0	0.9	1.8
ON	2.8	3.0	3.9	4.6	6.4	11.9	11.9	2.7
TIMER STANDBY	3.0	2.7	3.9	0	6.4	12.0	2.6	12.0

	CON4 8PIN	CON4 9PIN	IC3 1PIN	IC3 30PIN	IC3 31PIN	IC3 32PIN
CD	3.8	0.7	3.0	0.1	3.2	3.3
TAPE	0.7	0.7	0.3	3.6	3.2	3.3
LINE IN	3.2	3.2	3.0	3.6	0.3	3.3
TUNER	0.7	3.3	3.0	3.6	3.2	0.1

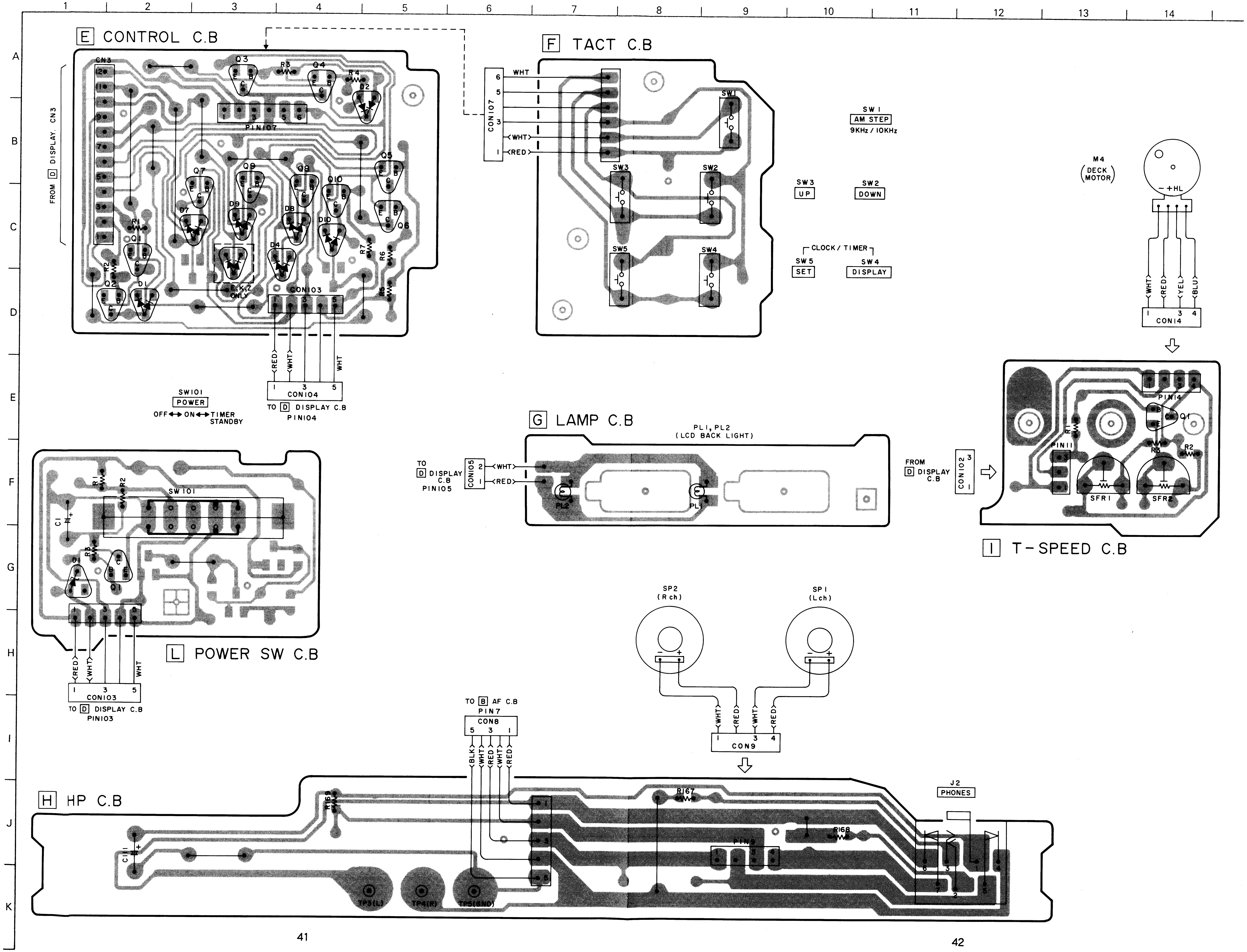
WIRING – 4 < CD >


C CD MAIN C.B
K POWER C.B
Q CD GND C.B
O MOTOR-1 C.B
P MOTOR-2 C.B
R RELAY C.B
M BATT-A C.B
N BATT-B C.B
J DECK C.B
AC VOLTAGE
SW1
U MODEL AC120V
AC220-240V
E,Z MODELS AC110-120V
AC220-230V
U,E,Z ONLY
TO B AF C.B PIN13 CON6
TO D DISPLAY C.B PIN5 CON5
TO D MOTOR-1 C.B PIN3 CON3
TO PICK UP ASSY CON2
TO PICK UP ASSY CON1
PICK UP ASSY
PIN1
PIN2
M1 (SLED MOTOR)
SW1 (INSIDE LIMIT SW)
M2 (SPINDLE MOTOR)
PIN3
RPE H
REV
FWD
CON12
TO B AF C.B PIN12
M3 (LOADING MOTOR)
SW2 (OPEN)
SW3 (CLOSE)
PIN106
FROM D DISPLAY C.B PIN106 CON106
TO B AF C.B PIN6 CON10
BATT. SUM2x8 12V
BATT. (BACK UP) SUM3x2 3V
FROM D DISPLAY C.B CON101
S1 (REC B)
S3 (CrO2)
S4 (CST)
S5 (FR)
S6 (PLAY)
S2 (REC A)
SOL 2 (FR)
SOL 1 (PLAY)
PIN101
K ONLY
PT1
U,E,Z ONLY
E,Z ONLY
F1
PIN11
FROM B AF C.B CON15
J3 AC~
U ONLY
WHT
RED
BLK
YEL
GRN
ORG
BLU
PNK
GRY
IC1
IC2
IC3
IC4
IC5
IC6
IC7
ICP1
A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
9
10
11
12
13
14

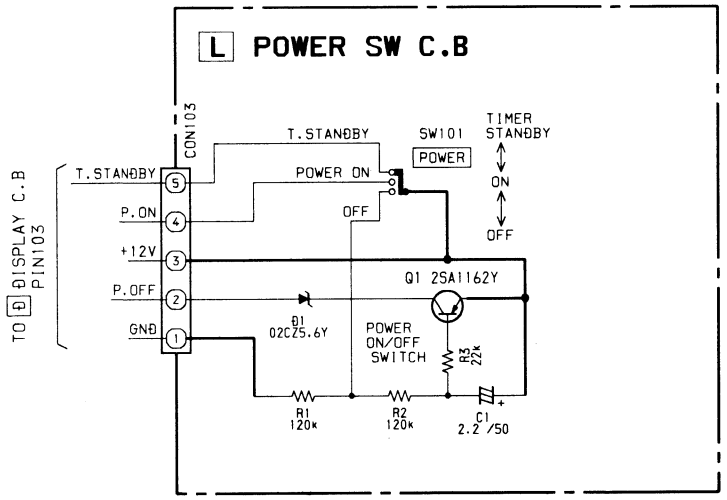
SCHEMATIC DIAGRAM – 4 < CD >

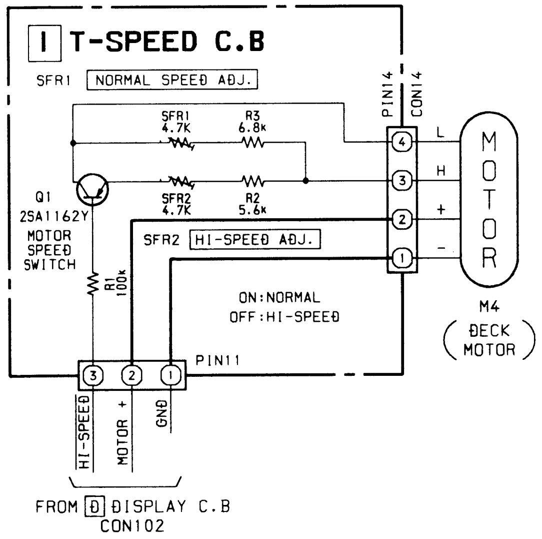

Q CD GND C.B
C CD MAIN C.B
MECHANISM ASSY KSL-2101A (1/2)
OPTICAL PICK UP KSS-210A
DETECTOR
LASER DIODE
VR1 LASER POWER ADJ.
FOCUS COIL
TRACKING COIL
M2 (SPINDLE MOTOR)
M1 (SLED MOTOR)
SW1 (INSIDE LIMIT SWITCH)
O MOTOR-1 C.B
CON1
CON2
CON3
PIN1
PIN2
PIN3
SPINDL
SLED
PUINNER
SFR2 TRACKING BALANCE ADJ.
SFR1 FOCUS BALANCE ADJ.
IC1 TA8191F
RF AMP FOCUS, TRACKING SLED, SPINDLE SERVO AMP
TP1 (TE)
TP2(RF)
TP3 (VREF)
Q10 2SA933S RS
RF SWITCH
Q6 2SA933SRS
LD CURRENT CONTROL
Q5 2SA952K STABI DRIVE
ICP1 ICP-N10
IC4 AN8377N
IC4 FOCUS, TRACKING SLED, DRIVER
IC5 TA8102P
IC5 SPINDLE MOTOR DRIVE
Q13 2SA933SRS DISC MOTOR SWITCH
Q14 DTA144TS
2VREF CONTROL
PLAY 5.0
OTHERS 0
IC2 TC9236F
DATA/SERVO PROCESSOR
NO EMPHA:0
PLAY EMPHA:4.6
OTHERS:4.6
IC7 TC40H002F
NOR GATE OSC
X1 16.93MHz
X2 14.39 MHz
Q9 DTC124XS
STAB
IC3 UPD6373GS
D/A CONVERTOR
IC6 M5223L
L.P.F
Q7, 8 DTC 124XS
Q1 DTC 124XS
Q2 DTC 124XS
Q3 2SA1296GR
+B SW
Q4 DTC124XS
Q4 +B CONTROL
NO EMPHA 0
EMPHA HSP 0
EMPHA NSP 0.6
CON5
GND
CDRST
DOOR
PUINNER
BUCK
DA/CO
BUS3
BUS2
BUS1
BUS0
TO D DISPLAY C.B PIN5
CON6
HI SPEED
CD ON
+8V
DGND
RCH
AGND
LCH
TO B AF C.B PIN13
(+5V)
(+8V)
(AGND)

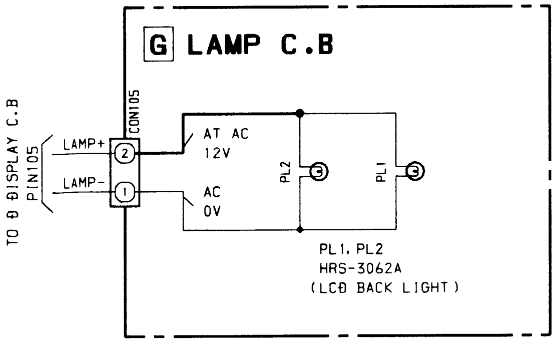
WIRING – 5 < CONTROL >

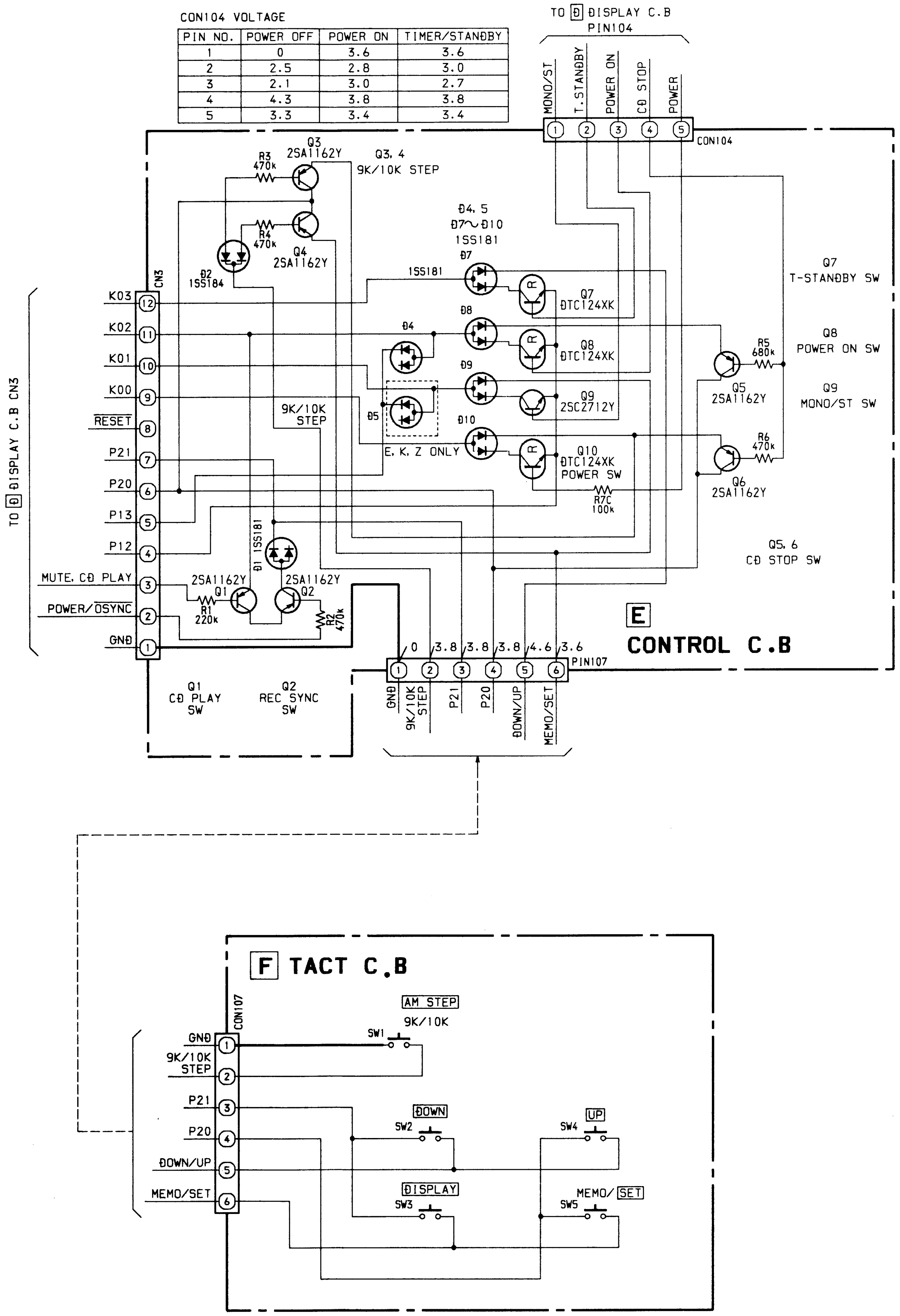

1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
K
E CONTROL C.B
FROM D DISPLAY CN3
CN3
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
R1
R2
R3
R4
R5
R6
R7
D1
D2
D4
D7
D8
D9
D10
E,K,Z ONLY
PIN107
CON103
RED
WHT
WHT
CON104
TO D DISPLAY C.B
PIN104
SW101
POWER
OFF ON TIMER STANDBY
F TACT C.B
CON107
WHT
<WHT>
<RED>
SW1
SW2
SW3
SW4
SW5
SW1
AM STEP
9KHz / 10KHz
SW3
UP
SW2
DOWN
CLOCK / TIMER
SW5
SET
SW4
DISPLAY
M4
(DECK MOTOR)
– +HL
WHT
RED
YEL
BLU
CON14
PIN14
Q1
R1
R2
R3
PIN11
SFR1
SFR2
I T-SPEED C.B
FROM D DISPLAY C.B
CON102
G LAMP C.B
PL1, PL2
(LCD BACK LIGHT)
TO D DISPLAY C.B
PIN105
CON105
<WHT>
<RED>
PL1
PL2
R1
R2
R3
C1
SW101
D1
Q1
L POWER SW C.B
RED
WHT
WHT
CON103
TO D DISPLAY C.B
PIN103
SP2
(R ch)
SP1
(L ch)
WHT
RED
WHT
RED
CON9
TO B AF C.B
PIN7
CON8
BLK
WHT
RED
WHT
RED
H HP C.B
R169
R167
R168
C111
PIN9
J2
PHONES
TP3(L)
TP4(R)
TP5(GND)

SCHEMATIC DIAGRAM – 5 < CONTROL >


L POWER SW C.B
TO D DISPLAY C.B PIN103
CON103
T.STANDBY
P.ON
+12V
P.OFF
GND
SW101 POWER
TIMER STANDBY
ON
OFF
POWER ON
Q1 2SA1162Y
D1 02CZ5.6Y
POWER ON/OFF SWITCH
R3 22k
R1 120k
R2 120k
C1 2.2/50


I T-SPEED C.B
SFR1 NORMAL SPEED ADJ.
SFR1 4.7K
R3 6.8k
SFR2 4.7K
R2 5.6k
SFR2 HI-SPEED ADJ.
Q1 2SA1162Y MOTOR SPEED SWITCH
R1 100k
ON:NORMAL
OFF:HI-SPEED
PIN14
CON14
L
H
+
-
MOTOR
M4 (DECK MOTOR)
PIN11
HI-SPEED
MOTOR +
GND
FROM D DISPLAY C.B CON102

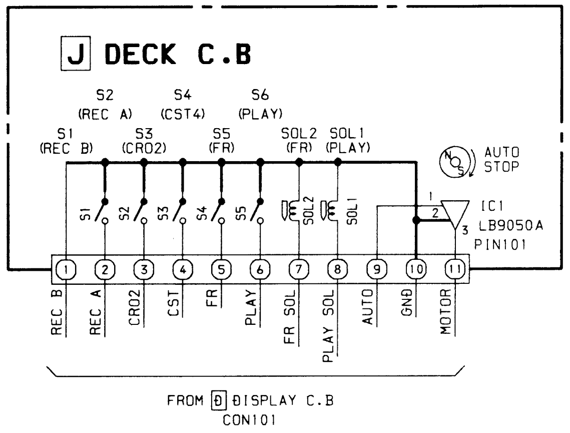

G LAMP C.B
TO D DISPLAY C.B PIN105
CON105
LAMP+
LAMP-
AT AC 12V
AC 0V
PL2
PL1
PL1, PL2
HRS-3062A
(LCD BACK LIGHT)

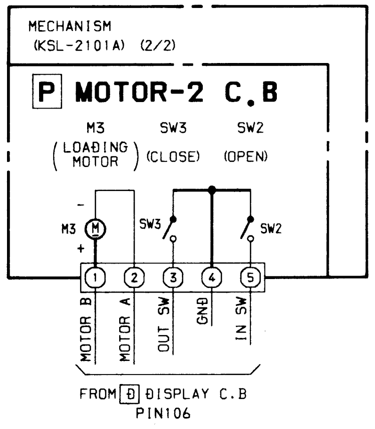


CON104 VOLTAGE

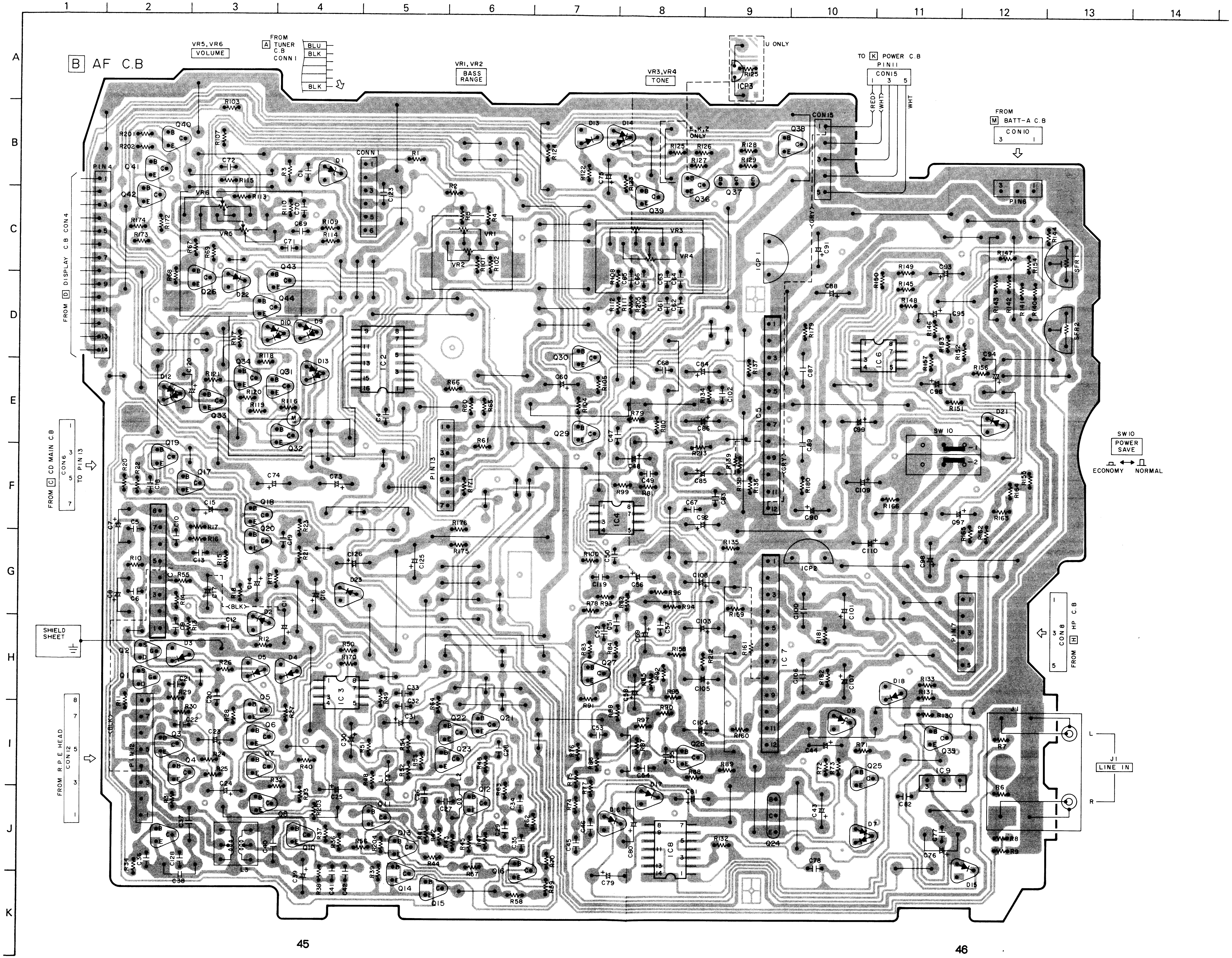
PIN NO.	POWER OFF	POWER ON	TIMER/STANDBY
1	0	3.6	3.6
2	2.5	2.8	3.0
3	2.1	3.0	2.7
4	4.3	3.8	3.8
5	3.3	3.4	3.4

TO D DISPLAY C.B PIN104
MONO/ST
T.STANDBY
POWER ON
CD STOP
POWER
CON104
E CONTROL C.B
TO D DISPLAY C.B CN3
CN3
K03
K02
K01
K00
RESET
P21
P20
P13
P12
MUTE, CD PLAY
POWER/DSYNC
GND
R3 470k
Q3 2SA1162Y
Q3, 4 9K/10K STEP
R4 470k
Q4 2SA1162Y
D2 1SS184
D4, 5 D7~D10 1SS181
D7
1SS181
Q7 DTC124XK
D8
D4
Q8 DTC124XK
D9
Q9 2SC2712Y
9K/10K STEP
D5
E, K, Z ONLY
D10
Q10 DTC124XK POWER SW
R7C 100k
Q7 T-STANDBY SW
Q8 POWER ON SW
Q9 MONO/ST SW
R5 680k
Q5 2SA1162Y
R6 470k
Q6 2SA1162Y
Q5, 6 CD STOP SW
D1 1SS181
2SA1162Y Q1
2SA1162Y Q2
R1 220k
R2 470k
0
3.8
3.8
3.8
4.6
3.6
PIN107
GND
9K/10K STEP
P21
P20
DOWN/UP
MEMO/SET
Q1 CD PLAY SW
Q2 REC SYNC SW
F TACT C.B
CON107
GND
9K/10K STEP
P21
P20
DOWN/UP
MEMO/SET
AM STEP 9K/10K
SW1
DOWN SW2
UP SW4
DISPLAY SW3
MEMO/SET SW5

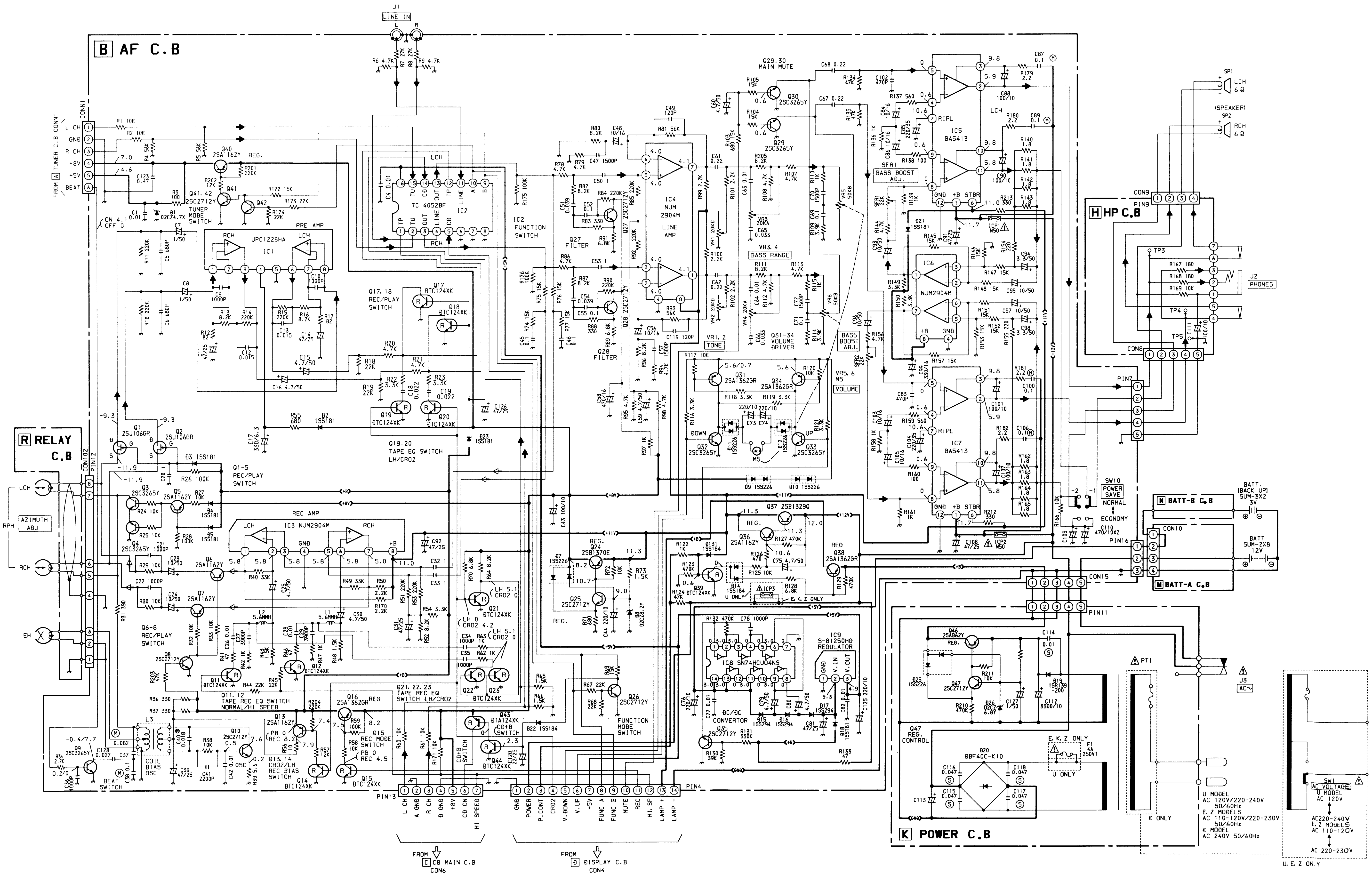

J DECK C.B
S2 (REC A)
S4 (CST4)
S6 (PLAY)
S1 (REC B)
S3 (CRO2)
S5 (FR)
SOL2 (FR)
SOL1 (PLAY)
AUTO STOP
IC1 LB9050A
PIN101
REC B
REC A
CRO2
CST
FR
PLAY
FR SOL
PLAY SOL
AUTO
GND
MOTOR
FROM D DISPLAY C.B CON101


MECHANISM (KSL-2101A) (2/2)
P MOTOR-2 C.B
M3 (LOADING MOTOR)
SW3 (CLOSE)
SW2 (OPEN)
M3
SW3
SW2
MOTOR B
MOTOR A
OUT SW
GND
IN SW
FROM D DISPLAY C.B PIN106

WIRING – 6 < AF >


B AF C.B
VR5, VR6 VOLUME
FROM A TUNER C.B CONN I
BLU
BLK
BLK
VR1, VR2 BASS RANGE
VR3, VR4 TONE
U ONLY
ICP3
E, K, Z ONLY
TO K POWER C.B PIN11
CON15
RED
WHT
WHT
FROM M BATT-A C.B CON10
PIN6
PIN4
FROM D DISPLAY C.B CON4
FROM C CD MAIN C.B CON6 TO PIN13
PIN13
SHIELD SHEET
FROM R.P.E HEAD CON12
PIN12
<BLK>
SW10 POWER SAVE
ECONOMY
NORMAL
FROM H HP C.B CON8
PIN7
J1 LINE IN
L
R
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
ICP1
ICP2
SFR1
SFR2
CONN1
1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
K

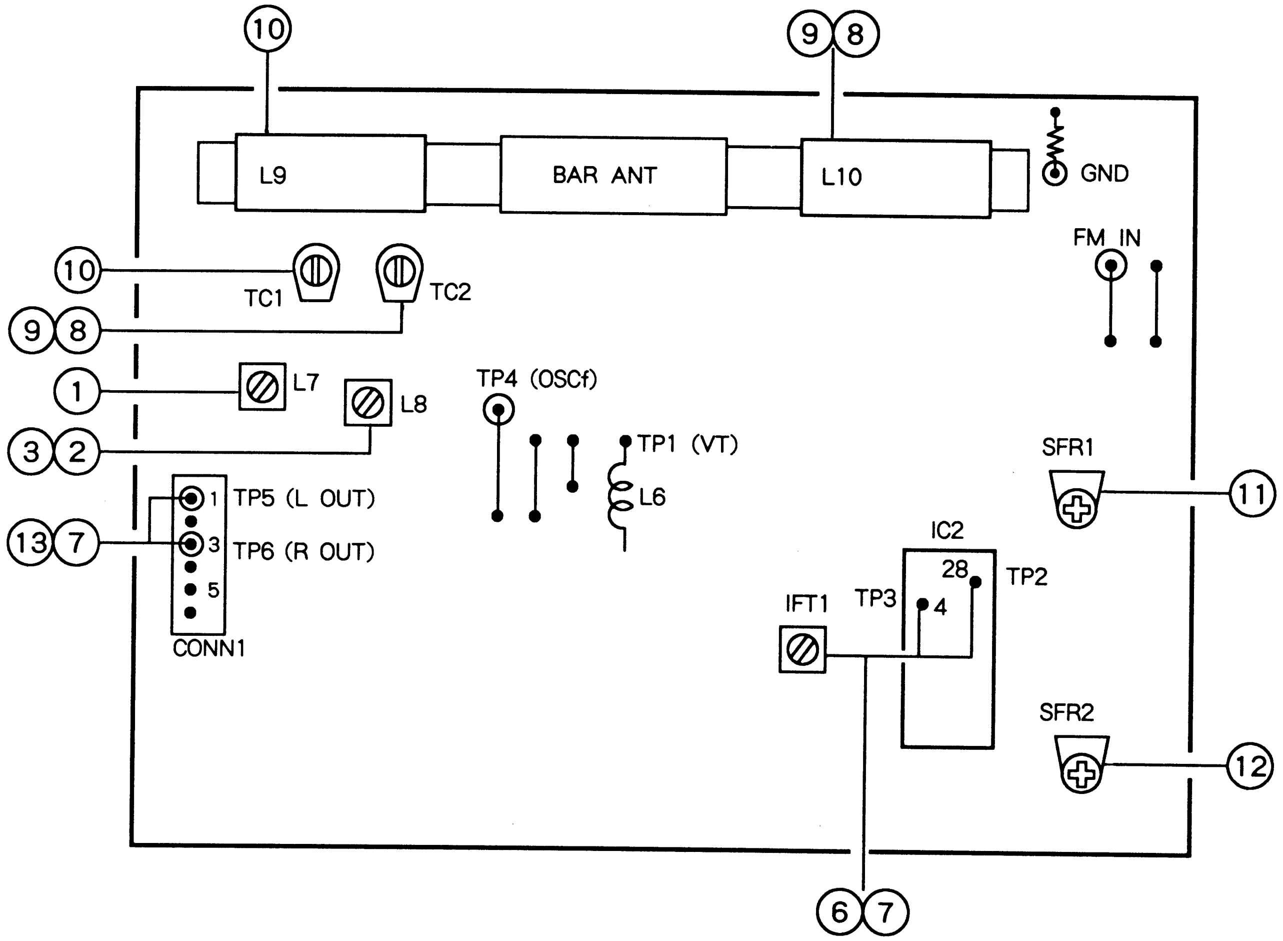
SCHEMATIC DIAGRAM – 6 < AF >


J1 LINE IN
B AF C.B
R RELAY C.B
H HP C.B
K POWER C.B
N BATT-B C.B
M BATT-A C.B
FROM A TUNER C.B CONN1
CONN1
L CH
GND
R CH
+8V
+5V
BEAT
UPC1228HA IC1
PRE AMP
TC 4052BF IC2
IC2 FUNCTION SWITCH
IC3 NJM2904M
REC AMP
IC4 NJM 2904M LINE AMP
IC5 BA5413
IC6 NJM2904M
IC7 BA5413
IC8 SN74HCU04NS
IC9 S-81250HG REGULATOR
Q29, 30 MAIN MUTE
Q41, 42 TUNER MODE SWITCH
Q17, 18 REC/PLAY SWITCH
Q19, 20 TAPE EQ SWITCH LH/CRO2
Q1-5 REC/PLAY SWITCH
Q6-8 REC/PLAY SWITCH
Q11, 12 TAPE REC EQ SWITCH NORMAL/HI SPEED
Q13, 14 CRO2/LH REC BIAS SWITCH
Q15 REC MODE SWITCH
Q21, 22, 23 TAPE REC EQ SWITCH LH/CRO2
Q27 FILTER
Q28 FILTER
Q31-34 VOLUME DRIVER
Q35 DC/DC CONVERTOR
Q47 REG. CONTROL
COIL BIAS OSC
BEAT SWITCH
AZIMUTH ADJ
RPH
EH
VR1, 2 TONE
VR3, 4 BASS RANGE
VR5, 6 M5 VOLUME
SFR1 BASS BOOST ADJ.
SFR2 BASS BOOST ADJ.
SW10 POWER SAVE NORMAL ECONOMY
SP1 LCH 6Ω
SP2 RCH 6Ω
(SPEAKER)
J2 PHONES
BATT. (BACK UP) SUM-3X2 3V
BATT SUM-2X8 12V
J3 AC~
PT1
SW1 AC VOLTAGE
U MODEL AC 120V
AC220-240V E, Z MODELS AC 110-120V
AC 220-230V
U, E, Z ONLY
E, K, Z ONLY
K ONLY
U MODEL AC 120V/220-240V 50/60Hz
E, Z MODELS AC 110-120V/220-230V 50/60Hz
K MODEL AC 240V 50/60Hz
FROM C CD MAIN C.B CON6
FROM D DISPLAY C.B CON4
PIN13: L CH, A GND, R CH, D GND, +8V, CD ON, HI SPEED
PIN4: GND, POWER, P.CONT, CRO2, V.DOWN, V.UP, +5V, FUNC A, FUNC B, MUTE, REC, HI.SP, LAMP +, LAMP -
CON8
CON9
CON10
CON11
CON15
F1 4A 250V

ADJUSTMENT

< RADIO SECTION >

A TUNER C.B


⑩
⑨⑧
L9
BAR ANT
L10
GND
FM IN
⑩
TC1
TC2
⑨⑧
①
L7
L8
③②
TP4 (OSCf)
TP1 (VT)
L6
SFR1
⑪
⑬⑦
1 TP5 (L OUT)
3 TP6 (R OUT)
5
CONN1
IC2
28
4
TP2
IFT1
TP3
SFR2
⑫
⑥⑦

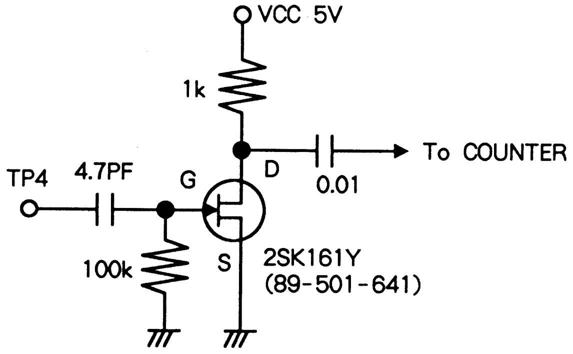
1. LW VT Adjustment (E, K, Z)
Settings : • Test point : TP1
• Adjustment location : L7
Method : Set to LW, 153kHz and adjust so that the test point becomes 1.9V ± 0.05V.

2. MW VT Adjustment (E, K, Z)
Settings : • Test point : TP1
• Adjustment location : L8
Method : Set to MW, 522kHz and adjust so that the test point becomes 1.4V ± 0.05V.

3. AM VT Adjustment (U)
Settings : • Test point : TP1
• Adjustment location : L8
Method : Set to AM, 530kHz and adjust so that the test point becomes 1.3V ± 0.05V.

4. FM VT Check
Settings : • Test point : TP1
Method : Set to FM, 87.5MHz and check so that the test point becomes 3.2V ± 0.3V.

5. FM OSC FREQ. Check
Settings : • Test point : TP4
Method : Connect a buffer to TP2. Set to FM 87.5MHz and check that the frequency at test point becomes 98.2 ± 0.001MHz.


VCC 5V
1k
To COUNTER
TP4
4.7PF
G
D
0.01
100k
S
2SK161Y
(89-501-641)

6. FM IF Adjustment (U)
IFT1 ········· 10.7MHz

7. DC Balance Adjustment
Settings : •Test point : TP2, TP3 (DC balance)
TP5, TP6 (distortion)
•SSG : 88.0MHz, 54dB
•Adjustment location : IFT1
Method : Set to FM, 88.0MHz and adjust IFT1 so that TP2 and TP3 output becomes 0V ± 0.02V. Check that the indicated TUNED is lit on at this time.

8. AM Tracking Adjustment (U)
L10 ········· 600kHz
TC2 ········· 1400kHz

9. MW Tracking Adjustment (E, K, Z)
L10 ········· 603kHz
TC2 ········· 1404kHz

10. LW Tracking Adjustment (E, K, Z)
L9 ········· 155kHz
TC1 ········· 288kHz

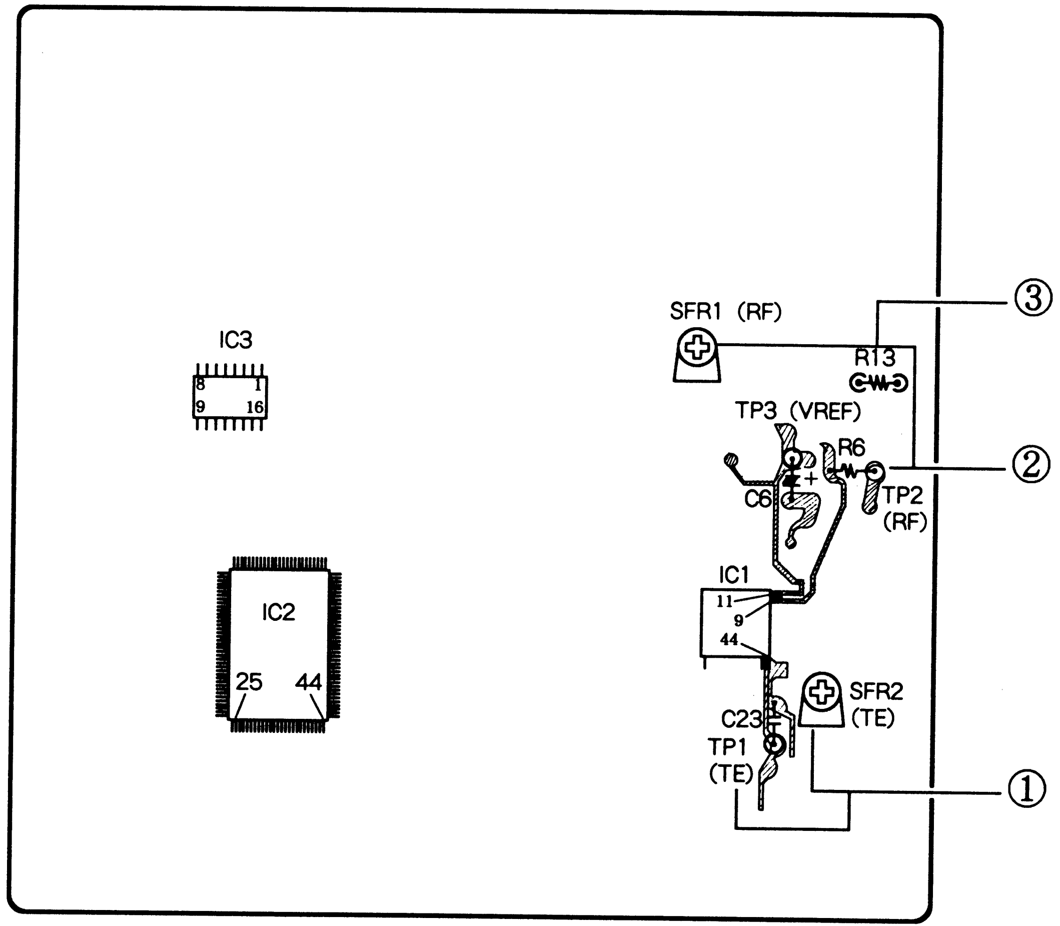
11. FM AUTO STOP LEVEL Adjustment
Settings : • Adjustment location : SFR1
• Input level : 30dB
Method : Set to FM, 88.0MHz and adjust Tuning LED to light on by SFR1.

12. AM (MW) AUTO STOP LEVEL Adjustment
Settings : • Adjustment location : SFR2
• Input level : 55dB
Method : Set to MW, 1404kHz (E, K, Z), 1400kHz (U) and adjust Tuning LED to light on by SFR2.

13. FM Separation Check
Settings : • Test point : TP5, TP6
• SSG : 98.0MHz, 54dB
• COMPOSIT MOD : 67.5kHz
• PILOT MOD : 7.5kHz
Method : Set to FM 98.0MHz and check that the separation at TP5 and TP6 output because more than 23dB.

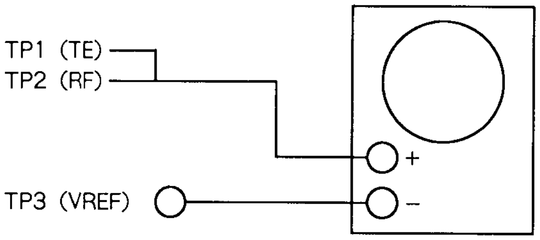
< CD SECTION >

C CD MAIN C.B


IC3
8
1
9
16
IC2
25
44
SFR1 (RF)
③
R13
TP3 (VREF)
R6
C6
②
TP2
(RF)
IC1
11
9
44
SFR2
(TE)
C23
TP1
(TE)
①

[PATTERN SIDE]

Connecting the Oscilloscope

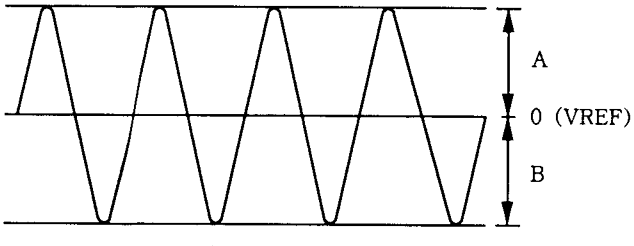


Oscilloscope (DC range)

Connect the nagative side (–) of an oscilloscope to TP3 (VREF) when making adjustment.

1. Tracking Balance Adjustlment

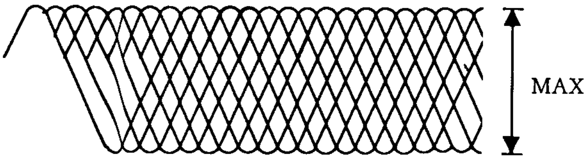
(1) Connect an oscilloscope to TP1 (TE) and TP3 (VREF).
(2) Insert the TCD-782 (YEDS-18) disc and push the PLAY button.
(3) Push the REPEAT button to set to the REPEAT mode.
(4) Push and hold the ▶▶| button. (MS mode).
(5) Adjust SFR2 (TB) to symmetrize the traverse waveform the to base line.



VOLT/DIV : 100mV
TIME/DIV : 0.5mS

2. Focus Balance Adjustment

(1) Connect an oscilloscope to TP2 (RF) and TP3 (VREF).
(2) Insert the TCD-782 (YEDS-18) disc and push the PLAY button.
(3) Adjust SFR1 (FB) so that the amplitude of the oscilloscope waveform is maximum.

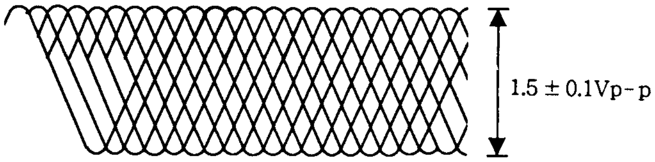


VOLT/DIV : 200mV
TIME/DIV : 0.2 μ S

3 RF Waveform Check

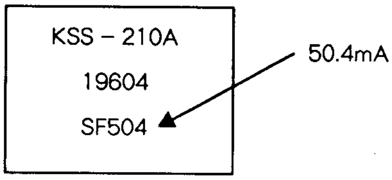
Make the RF waveform check when replacing or repairing the optical block.

1. Connect an oscilloscope to test points TP2 (RF) and TP3 (VREF).
2. Power switch ON.
3. Insert the test disc TCD-782 (YEDS-18) and play the second program.
4. Check the waveform is such as the following figure.



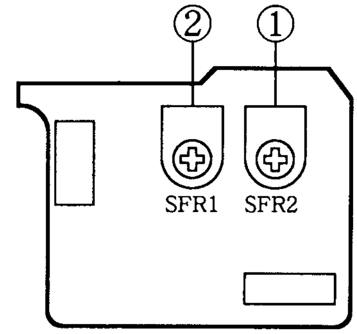
VOLT/DIV : 200mV
TIME/DIV : 0.2 μS

Note : The current of the laser signal can be checked with the voltages on both sides of R13 (10 Ω).
The difference for the specified value shown on the label must be within ± 6.0mA.



$$\text{Laser current Iop} = \frac{\text{Voltage across R13}}{10\,\Omega}$$

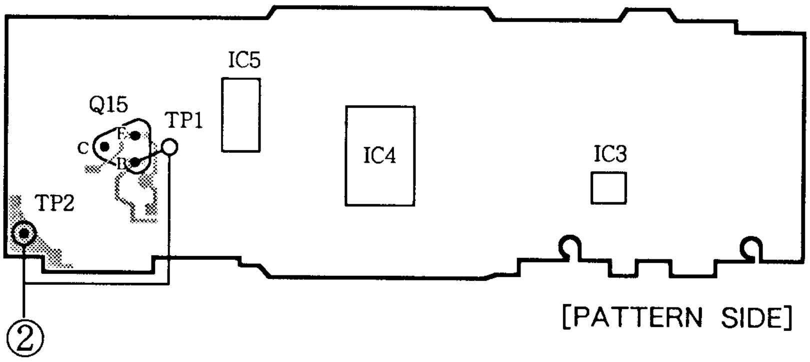
< AF/DECK SECTION >


②
①
SFR1
SFR2

F T-SPEED C.B

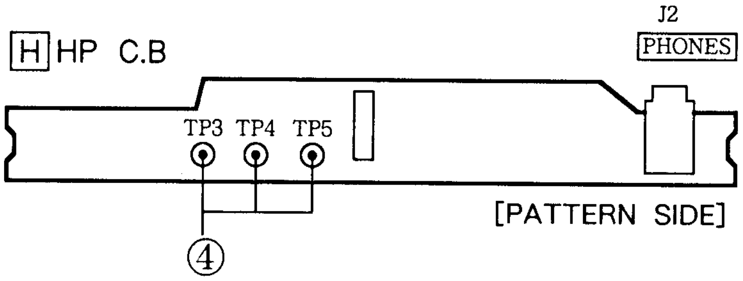
[TOP VIEW]

D DISPLAY C.B

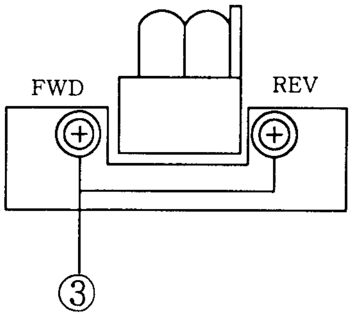

IC5
Q15
TP1
C
E
B
TP2
IC4
IC3
②

[PATTERN SIDE]

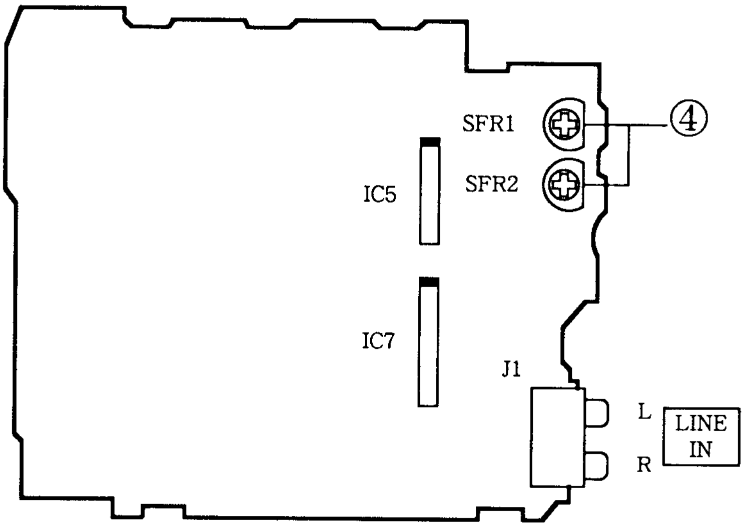
H HP C.B


J2
PHONES
TP3
TP4
TP5
④

[PATTERN SIDE]



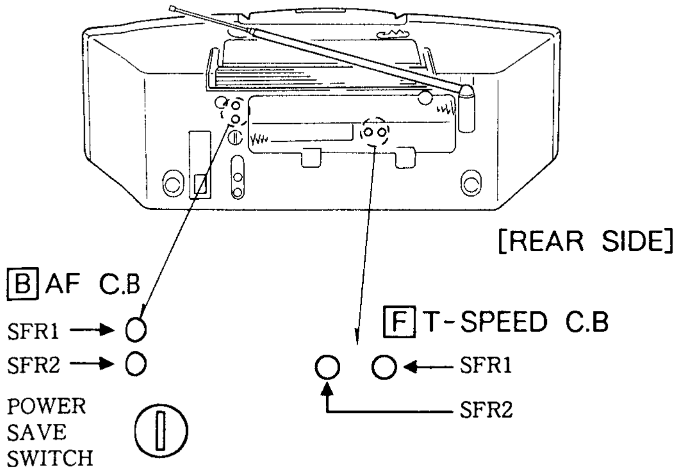
B AF C.B

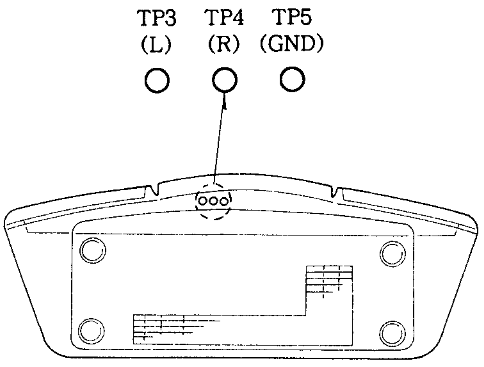

SFR1
SFR2
④
IC5
IC7
J1
L
R
LINE IN

[PATTERN SIDE]

* Adjustment without opening nor closing the cabinet

Note : Regular speed adjustment and bus boost adjustment can be performed without disassembling the cabinet.


[REAR SIDE]
B AF C.B
SFR1
SFR2
POWER SAVE SWITCH
F T-SPEED C.B
SFR1
SFR2


TP3 (L)
TP4 (R)
TP5 (GND)

[BOTTOM SIDE]

1. Normal Speed Adjustment
   Settings : •Test point : J2 (PHONES)
   •Test tape : TTA-100 (TTA-111S)
   •Adjustment location : SFR2
   Method : Play back the test tape with FWD & REV and adjust SFR2 so that the frequency is 3000Hz.

2. High Speed Adjustment
   Settings : •Test point : J2 (PHONES)
   •Test tape : TTA-100 (TTA-111S)
   •Adjustment location : SFR1
   Method : Connect TP1 (Q15 base) to TP2 (GND) and set the the 2 times speed mode. Play back the test tape with FWD & REV and adjust SFR1 so that the frequency is 5100Hz.
   After checking, disassemble the short lead wires of TP1 and TP2.

3. Azimuth Adjustment
   Settings : •Test tape : TTA-320
   •Adjustment locatio : Azimuth adjustment screw
   Method : Play back the 8 kHz portion of the test tape and adjust so that the output is maximum in the FWD PLAY and REV PLAY modes.

※ Complete in the direction of fixing the screws.

4. Bass Boost Adjustment
   ☆Adjust after screwing the front and rear cabinet.
   Setting : • Test point : TP3, TP4, TP5
   • Input signal : 0 dB (1V) input from −45dB (LINE IN)
   • TONE VOL : Mechanical center
   • BASS VOL : MAX
   • VOLUME : MAX
   • POWER SAVE : OFF
   • Adjustment location : SFR1 (Lch)
   SFR2 (Rch)
   Method :
   Level inputting signal 100Hz (−45 dB) Ⓐ
   Level inputting signal 1kHz (−45 .dB) Ⓑ
   Adjust so that the output difference between Ⓐ and Ⓑ (Ⓐ>Ⓑ) is 6dB ±0.5dB at the test point.

PRACTICAL SERVICE FIGRE

< RADIO SECTION >

< U Model >

Sensitivity :	
(IHF, THD 3%)	FM 16 ± 5dB (98MHz)
(S/N 10dB)	AM 48 ± 6dB (1000kHz)

< E, K, Z Models >

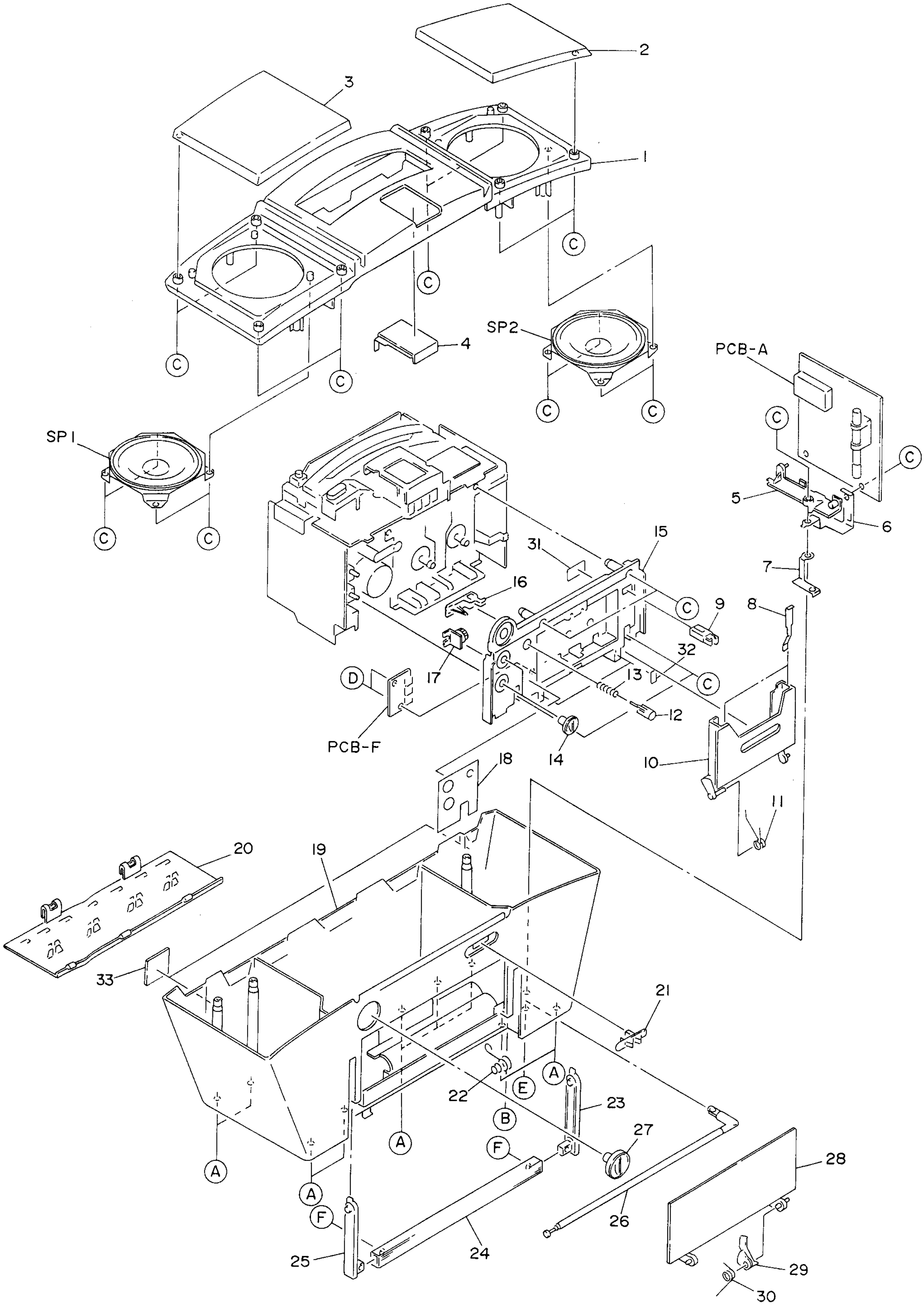
Sensitivity :	
(IHF,THD 3%)	FM 16 ± 5dB (98MHz)
(S/N 10dB)	MW 48 ± 6dB (999kHz)
(S/N 10dB)	LW 58 ± 6dB (218kHz)
Intermediate frequency :	FM 10.7MHz AM 450kHz
FM stereo separation :	26 ± 6dB (98MHz)

< TAPE RECORDER SECTION >

Recording bias frequency :	61kHz
Erasing ratio :	More than 60dB
Distortion :	Less than 3.0% (PB) Less than 3.0% (REC/PB)
S/N ratio :	More than 39dB (DC, PB) More than 35dB (AC, PB) More than 37dB (DC, REC/PB) More than 33dB (AC, REC/PB)
Noise :	Less than 0.5mV (DC, PB MIN) Less than 0.7mV (AC, PB MIN)
Wow & flutter :	Less than 0.18% (JIS)
Take-up torque :	30~60g-cm
F.F & REW torque :	70~140g-cm
Back tension :	2.0~5.0g-cm
Test tape :	NORMAL TTA-100 (TTA-111S)

EXPLODED VIEW – 1

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
A	87-067-873-010	BVT2+3-25 W/O SLOT	C	87-067-758-010	BVT2+3-12 W/O SLOT	E	87-493-100-410	VWWS+3-16
B	87-067-703-010	BVT2+3-10 W/O SLOT	D	87-067-684-010	BVT2+2.6-6 W/O SLOT	F	87-623-097-410	QT1+3-12 (B)

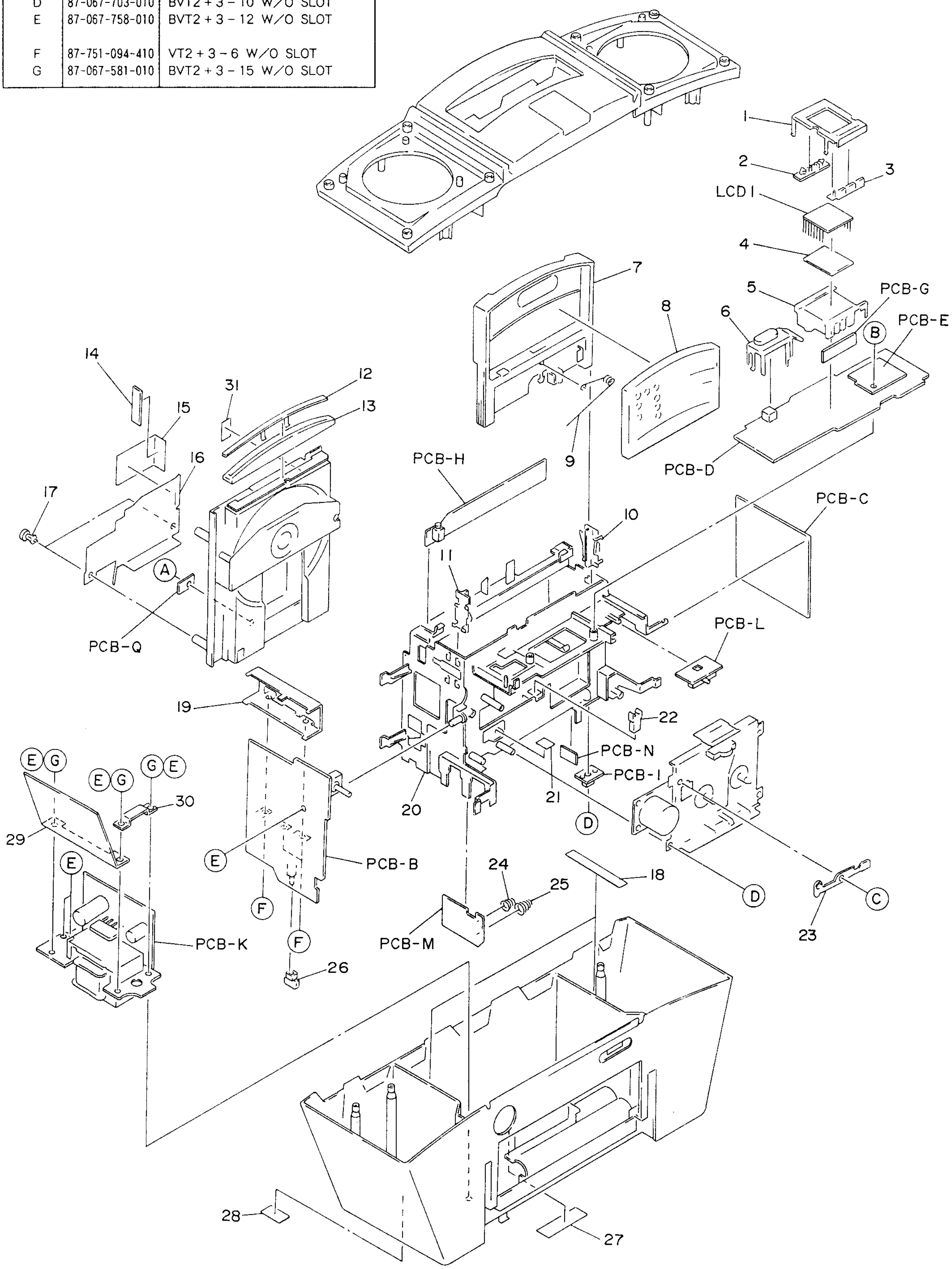

2
3
1
C
C
C
C
SP2
4
PCB-A
C
C
C
C
SP1
C
C
5
6
31
15
7
16
C
9
8
32
17
13
C
D
12
PCB-F
14
10
18
11
20
19
33
21
22
E
A
23
B
A
27
F
28
A
A
F
26
25
24
29
30

MECHANICAL PARTS LIST

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	1-1	★81-CD1-033-010	CABINET, FRONT 〔B〕 (U)	※	1
	1-1	★81-CD1-001-110	CABINET, FRONT 〔B〕 (E, K, Z)	※	1
	1-1	★81-CD1-052-010	CABINET, FRONT 〔ST〕 (Z)	※	1
	1-2	★81-CD1-039-010	SPEAKER NET L ASSY (U)	※	1
	1-2	★81-CD1-006-010	SPEAKER NET L ASSY (E, K, Z)	※	1
	1-3	★81-CD1-037-010	SPEAKER NET R ASSY (U)	※	1
	1-3	★81-CD1-003-010	SPEAKER NET R ASSY (E, K, Z)	※	1
	1-4	★81-CD1-002-010	WINDOW, DISPLAY	※	1
	1-5	★81-CD1-204-010	HOLDER, TUNING	※	1
	1-6	★81-CD1-224-010	TERMINAL, TUNING	※	1
	1-7	★81-CD1-206-010	TERMINAL, ANTENNA	※	1
	1-8	★81-CD1-211-010	P – SPRING, CASSETTE	※	2
	1-9	★87-064-108-010	LATCH, NC		1
	1-10	★81-CD1-013-010	BOX, CASSETTE 〔B〕	※	1
	1-10	★81-CD1-057-010	BOX, CASSETTE 〔ST〕	※	1
	1-11	★81-CD1-213-010	T – SPRING, CASSETTE BOX	※	1
	1-12	★81-CD1-030-010	BUTTON, EJECT	※	1
	1-13	★81-CD1-227-010	C – SPRING, EJECT	※	1
	1-14	★81-CD1-022-010	KNOB, TONE	※	2
	1-15	★81-CD1-014-010	COVER, TOP	※	1
	1-16	★81-CD1-222-010	LEVER, EJECT	※	1
	1-17	★87-064-112-019	DAMPER, OIL		1
	1-18	★81-CD1-026-019	PLATE, TOP COVER	※	1
	1-19	★81-CD1-034-010	CABINET, REAR 〔B〕 (U)	※	1
	1-19	★81-CD1-036-010	CABINET, REAR 〔B〕 (E, Z)	※	1
	1-19	★81-CD1-035-010	CABINET, REAR 〔B〕 (K)	※	1
	1-19	★81-CD1-055-010	CABINET, REAR 〔ST〕 (Z)	※	1
	1-20	81-CD1-027-010	LID, BATTERY 〔B〕	※	1
	1-20	81-CD1-063-010	LID, BATTERY 〔ST〕	※	1
	1-21	★81-CD1-023-010	KNOB, POWER 〔B〕	※	1
	1-21	★81-CD1-062-010	KNOB, POWER 〔ST〕	※	1
	1-22	★81-CD1-207-010	C – SPRING, BATTERY	※	1
	1-23	★81-CD1-017-010	HANDLE, ARM L 〔B〕	※	1
	1-23	★81-CD1-060-010	HANDLE, ARM L 〔ST〕	※	1
	1-24	★81-CD1-015-010	GRIP, HANDLE 〔B〕	※	1
	1-24	★81-CD1-058-010	GRIP, HANDLE 〔ST〕	※	1
	1-25	★81-CD1-016-010	HANDLE, ARM R 〔B〕	※	1
	1-25	★81-CD1-059-010	HANDLE, ARM R 〔ST〕	※	1
	1-26	87-043-109-019	ANTENNA, ROD		1
	1-27	★81-CD1-021-010	KNOB, VOLUME 〔B〕	※	1
	1-27	★81-CD1-061-010	KNOB, VOLUME 〔ST〕	※	1
	1-28	★81-CD1-012-010	LID, TOP 〔B〕	※	1
	1-28	★81-CD1-056-010	LID, TOP 〔ST〕	※	1
	1-29	★81-CD1-220-010	CAM, TOP LID	※	1
	1-30	★81-CD1-234-010	T – SPRING, TOP LID	※	1
	1-31	★81-598-249-010	CLOTH, 15 – 25		1
	1-32	★81-CD1-233-010	CLOTH, 6 – 25	※	2
	1-33	★81-CD1-235-010	SHEET, FOOT	※	2

EXPLODED VIEW – 2

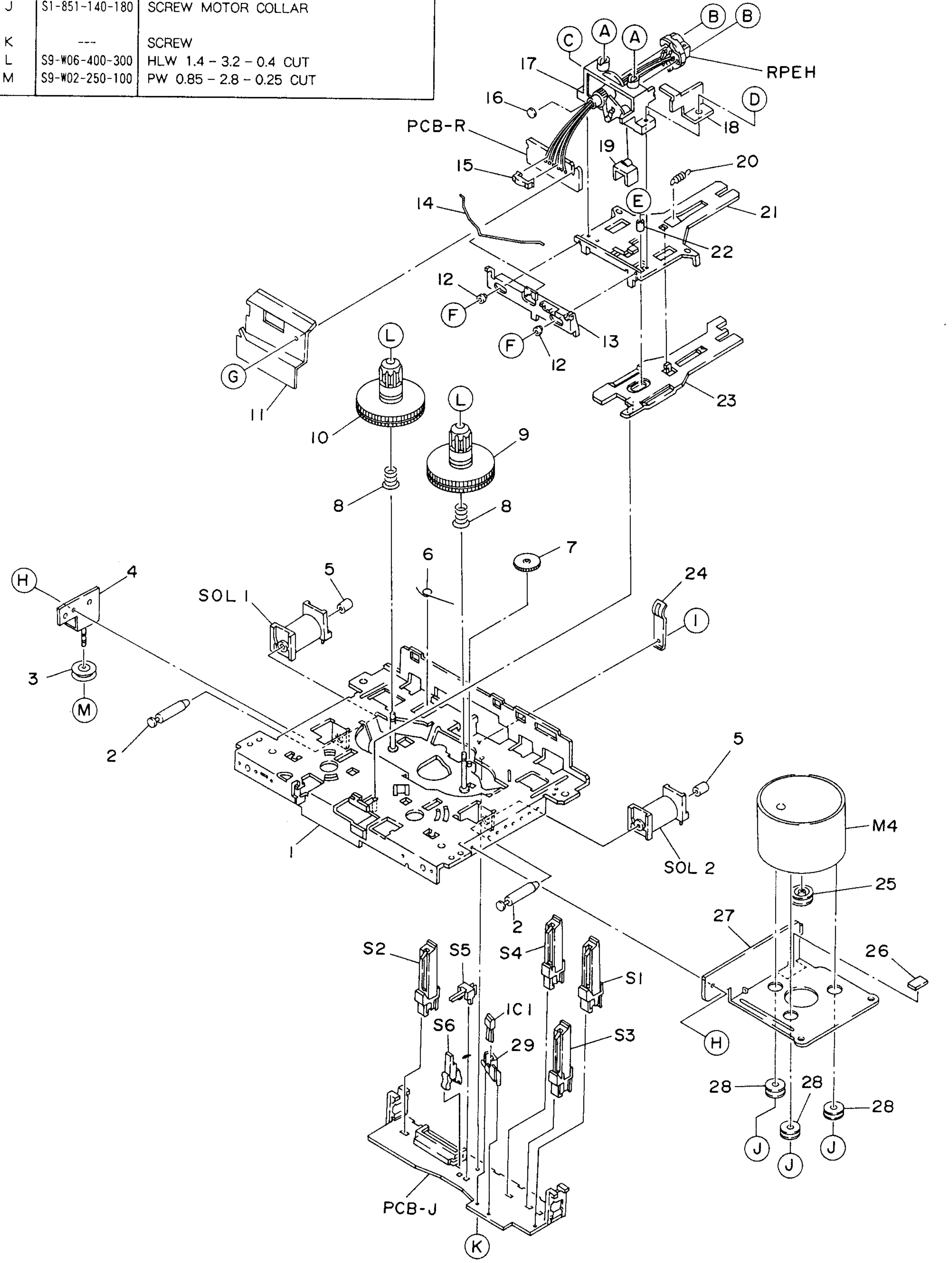
REF. NO.	PART NO.	DESCRIPTION
A	87-581-035-410	UIT + 2 – 6
B	87-067-698-010	BVT2 + 3 – 18 W/O SLOT
C	81-CD1-225-010	SPECIAL SCREW
D	87-067-703-010	BVT2 + 3 – 10 W/O SLOT
E	87-067-758-010	BVT2 + 3 – 12 W/O SLOT
F	87-751-094-410	VT2 + 3 – 6 W/O SLOT
G	87-067-581-010	BVT2 + 3 – 15 W/O SLOT


1
2
3
LCD1
4
5
PCB-G
6
PCB-E
B
7
8
PCB-D
9
PCB-H
14
31
12
13
15
16
17
A
PCB-Q
10
PCB-C
11
PCB-L
19
22
PCB-N
PCB-I
E G
E G
G E
30
29
E
E
PCB-B
F
F
26
20
21
D
24
25
18
PCB-M
PCB-K
D
C
23
28
27

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	2-1	★81-CD1-010-010	PANEL, DISPLAY	※	1
	2-2	★81-CD1-020-110	GUIDE, LIGHT B	※	1
	2-3	★81-CD1-019-110	GUIDE, LIGHT T	※	1
	2-4	★81-CD1-217-210	SHEET, LAMP	※	1
	2-5	★81-CD1-215-110	HOLDER, LCD	※	1
	2-6	★81-CD1-024-010	BUTTON, CD OPEN	※	1
	2-7	★81-CD1-009-110	TRAY, REMOCON 〔B〕	※	1
	2-7	★81-CD1-054-010	TRAY, REMOCON 〔ST〕	※	1
	2-8	★81-CD1-670-010	CONTROLLER, REMOTE RC－EX5 〔B〕	※	1
	2-8	★81-CD1-660-010	CONTROLLER, REMOTE RC－EX5Z 〔ST〕	※	1
	2-9	★81-CD1-214-010	T－SPRING,TRAY	※	1
	2-10	★81-CD1-203-110	GUIDE, TRAY L	※	1
	2-11	★81-CD1-202-110	GUIDE, TRAY R	※	1
	2-12	★81-CD1-018-010	TRIM, CD PANEL	※	1
	2-13	★81-CD1-008-010	PANEL, CD 〔B〕	※	1
	2-13	★81-CD1-053-010	PANEL, CD 〔ST〕	※	1
	2-14	---	CUSHION, S 70－18－2		1
	2-15	---	SHEET, SHIELD		1
	2-16	★81-CD1-229-110	PLATE, CD SHIELD	※	1
	2-17	★81-CD1-230-010	RIVET, NYLON 3.5－4.5	※	2
	2-18	★81-CD1-236-010	CLOTH, 6－98	※	2
	2-19	---	HEAT SINK		1
	2-20	★81-CD1-201-110	CHASSIS, CENTER	※	1
	2-21	★81-CD1-231-010	SHEET, REMOCON	※	1
	2-22	★87-064-108-010	LACTH, NC		1
	2-23	★81-CD1-223-010	ARM, EJECT	※	1
	2-24	★81-CD1-209-010	C－SPRING, BATTERY N3	※	1
	2-25	★81-CD1-208-010	C－SPRING, BATTERY N2	※	1
	2-26	★81-CD1-029-019	BUTTON, ECONOMY	※	1
	2-27	★81-CD1-044-010	PLATE, SPEC (U)	※	1
	2-27	★81-CD1-047-010	PLATE, SPEC (E)	※	1
	2-27	★81-CD1-045-010	PLATE, SPEC (K)	※	1
	2-27	★81-CD1-046-010	PLATE, SPEC (Z)	※	1
	2-28	★81-CD1-042-010	PLATE, AC (U)	※	1
	2-28	★81-CD1-051-010	PLATE, AC (E, Z)	※	1
	2-29	---	HEAT SINK EX (U)		1
	2-30	---	HEAT SINK EX2 (U)		1
	2-31	★81-598-249-010	CLOTH, 15－25		1

EXPLODED VIEW – 3

REF. NO.	PART NO.	DESCRIPTION
A	S9-P15-200-630	SCREW ⊕⊖
B	S9-F13-164-820	SCREW HEAD COLLAR S
C	S9-P02-200-510	SCREW M2 – 5 TAMS
D	S9-P01-200-510	SCREW ⊕ M2 – 5
E	S9-C25-205-030	SCREW CAMERA S TAPPING 2 – 5
F	S9-C01-173-010	SCREW CAMERA M1.7 – 3
G	S9-P12-200-510	SCREW S TAMS TAPPING M2 – 5
H	S9-P04-200-410	SCREW C TAPPING M2 – 4
I	S9-P11-200-320	SCREW C TAPPING M2 – 3 SPECIAL
J	S1-851-140-180	SCREW MOTOR COLLAR
K	---	SCREW
L	S9-W06-400-300	HLW 1.4 – 3.2 – 0.4 CUT
M	S9-W02-250-100	PW 0.85 – 2.8 – 0.25 CUT



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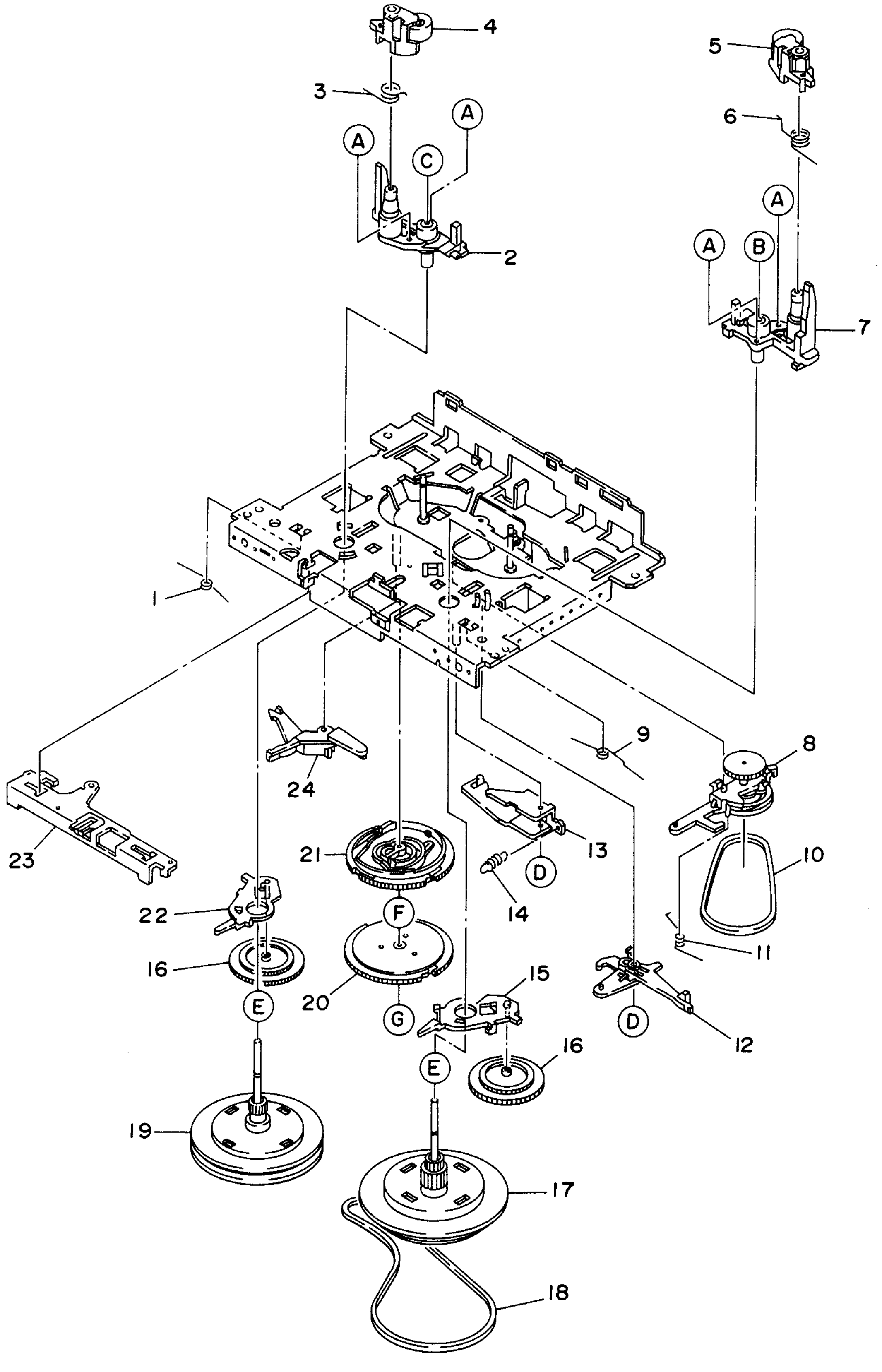
PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	3-1	★S1-888-015-050	CHASSIS ASSY		1
	3-2	★S1-880-210-050	PLUNGER		2
	3-3	★S1-865-090-300	PULLEY, C		1
	3-4	★S1-888-015-060	C PULLEY BRACKET ASSY		1
	3-5	★S1-880-210-060	HOLDER, PLUNGER		2
	3-6	★S1-888-020-040	SPRING, HEAD PANEL		1
	3-7	★S1-888-050-080	GEAR, FF		1
	3-8	★S1-888-050-150	SPRING, B. T		2
	3-9	★S1-888-053-030	T REEL ASSY F		1
	3-10	★S1-888-053-040	T REEL ASSY R		1
	3-11	---	PLATE, SHIELD		1
	3-12	★S1-880-020-280	COLLAR, CHP LEVER		2
	3-13	★S1-880-020-060	LEVER, CHP		1
	3-14	★S1-880-040-050	SPRING, PINCH ROLLER		1
	3-15	---	CLAMP, WIRE		1
	3-16	★S1-865-090-610	SPEACER		1
	3-17	★S1-888-023-010	HEAD BASE ASSY		1
	3-18	★S1-888-020-150	HOLDER, B		1
	3-19	★S1-888-020-140	HOLDER, A		1
	3-20	★S1-888-020-210	SPRING, RC V		1
	3-21	★S1-888-020-020	PANEL, HEAD A		1
	3-22	★S1-888-020-160	COLLAR, PANEL		1
	3-23	★S1-888-025-010	HEAD PANEL B ASSY		1
	3-24	★S1-880-010-020	SPRING, PACK		1
	3-25	★S1-880-090-320	PULLEY, MOTOR		1
	3-26	★S1-853-310-060	MAT		1
	3-27	---	BRACKET, MOTOR		1
	3-28	★S1-821-120-660	RUBBER, MOTOR		3
	3-29	★S1-888-530-030	HOLDER, IC		1

EXPLODED VIEW – 4

REF. NO.	PART NO.	DESCRIPTION
A	S9-P04-200-510	SCREW C TAPPING M2 – 5
B	S9-W06-500-500	HLW 1.8 – 4 – 0.5 CUT
C	S9-W06-500-800	HLW 1.7 – 3.5 – 0.5 CUT
D	S9-W06-400-400	HLW2.1 – 5 – 0.4 CUT
E	S9-W05-200-300	HLW 2.3 – 3.8 – 0.2 CUT
F	S9-E01-002-020	E RING ϕ 2.0
G	S9-W06-500-400	HLW 1.55 – 3.5 – 0.5 CUT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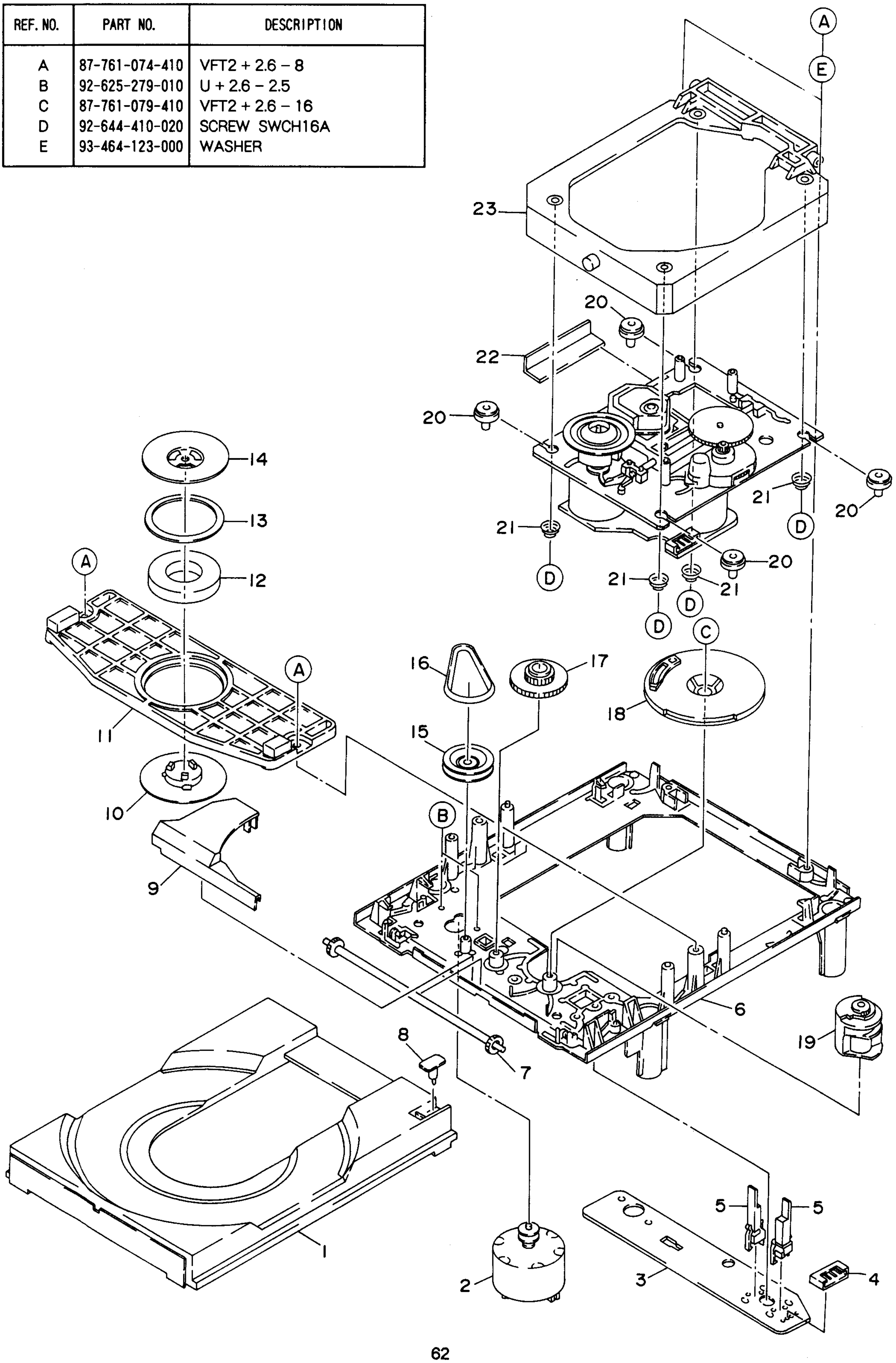
PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	4-1	★S1-888-050-140	R－SPRING, TG ARM		1
	4-2	★S1-888-093-020	FL METAL R ASSY		1
	4-3	★S1-888-040-040	R－SPRING, P ARM		1
	4-4	★S1-888-043-020	PINCH ROLLER ARM R ASSY		1
	4-5	★S1-888-043-010	PINCH ROLLER ARM F ASSY		1
	4-6	★S1-888-040-030	F－SPRING, P ARM		1
	4-7	★S1-888-093-010	FL METAL F ASSY		1
	4-8	★S1-888-073-010	RF CLUTCH ASSY		1
	4-9	★S1-888-050-130	F－SPRING, TG ARM		1
	4-10	★S1-888-070-070	BELT, RF		1
	4-11	★S1-888-210-090	SPRING, TRIGGER ARM		1
	4-12	★S1-888-050-090	ARM, RF TRIGGER		1
	4-13	★S1-888-210-040	LEVER, P KICK		1
	4-14	★S1-888-210-110	SPRING, PK LEVER		1
	4-15	★S1-888-055-010	T GEAR ARM F ASSY		1
	4-16	★S1-888-050-070	GEAR, T		2
	4-17	★S1-888-093-030	FLYWHEEL F ASSY		1
	4-18	★S1-888-090-300	BELT, M		1
	4-19	★S1-888-093-040	FLYWHEEL R ASSY		1
	4-20	★S1-888-210-100	GEAR, RF CAM		1
	4-21	★S1-888-210-020	GEAR, M		1
	4-22	★S1-888-055-020	T GEAR ARM R ASSY		1
	4-23	★S1-888-210-010	LEVER, CH SLIDE		1
	4-24	★S1-888-210-030	ARM, M TRIGGER		1

EXPLODED VIEW – 5

REF. NO.	PART NO.	DESCRIPTION
A	87-761-074-410	VFT2 + 2.6 – 8
B	92-625-279-010	U + 2.6 – 2.5
C	87-761-079-410	VFT2 + 2.6 – 16
D	92-644-410-020	SCREW SWCH16A
E	93-464-123-000	WASHER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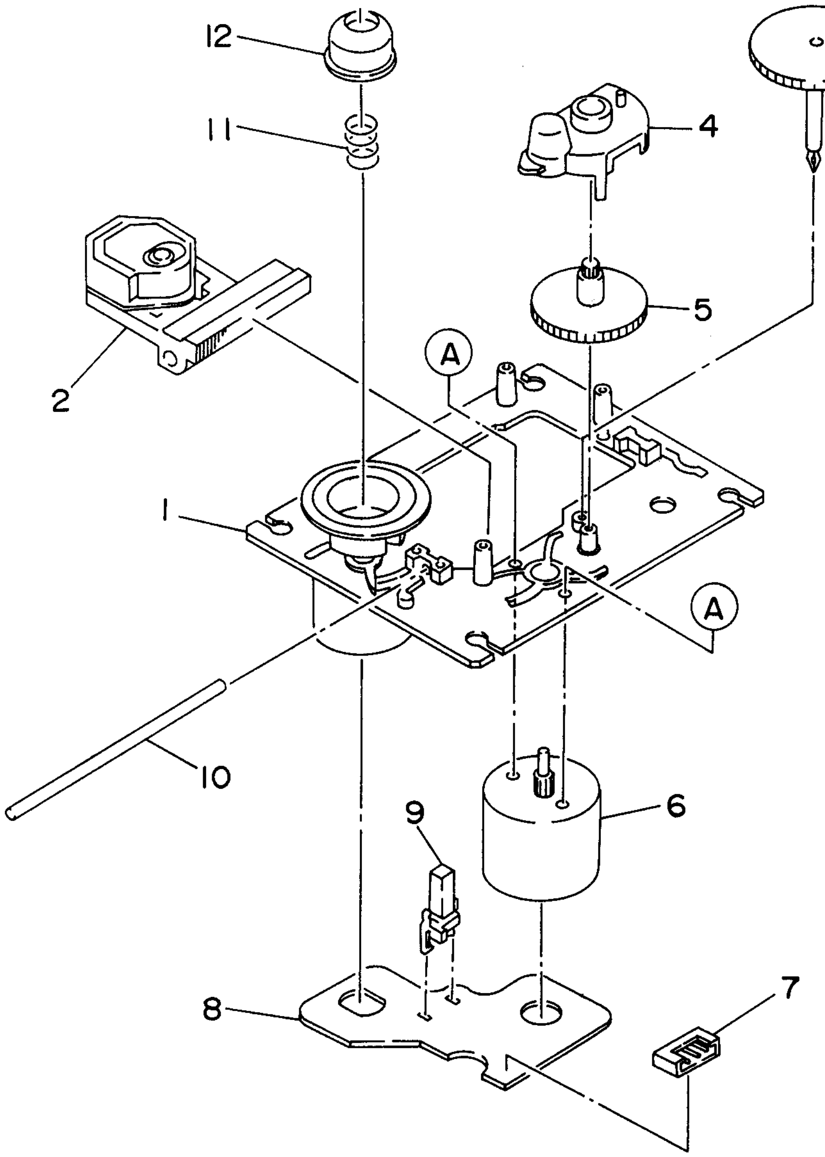
PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	5-1	★92-625-288-040	TRAY		1
	5-2	★9X-262-511-710	LOADING MOTOR ASSY		1
	5-3	---	PWB, LOADING		1
	5-4	★91-564-721-110	CONNECTOR 5P		1
	5-5	91-572-086-110	SWITCH, LEAF		2
	5-6	---	CHASSIS, MAIN		1
	5-7	★92-625-275-030	GEAR, TRAY		1
	5-8	---	SW PIN		1
	5-9	★92-625-282-020	COVER, GEAR		1
	5-10	★92-625-286-030	PULLEY, CHUCKING		1
	5-11	★92-625-284-040	PLATE, CHUCKING		1
	5-12	★91-452-493-210	MAGNET		1
	5-13	★92-625-541-010	DAMPER		1
	5-14	★92-625-277-010	YOKE, CHUCK		1
	5-15	★92-625-276-010	PULLEY, LOADING		1
	5-16	★93-653-387-000	BELT, LM		1
	5-17	★92-625-274-020	GEAR, MEDDLE		1
	5-18	★92-625-285-030	GEAR, DRIVE		1
	5-19	★92-625-283-020	CAM, CONTROL		1
	5-20	★92-625-278-010	INSULATOR		4
	5-21	★92-625-280-010	SPRING		4
	5-22	---	PLATE, PUSH		1
	5-23	---	SUB CHASSIS ASSY W/INSU SHAFT		1

EXPLODED VIEW – 6

REF. NO.	PART NO.	DESCRIPTION
A	87-261-032-210	V + 2 – 3



PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	6-1	★9X-262-513-310	T.T CHASSIS ASSY		1
	6-2	98-848-127-11Z	PICK UP KSS – 210A		1
	6-3	★92-625-188-020	GEAR, A		1
	6-4	★92-625-544-010	COVER		1
	6-5	---	GEAR, B		1
	6-6	★9X-262-513-210	SLED MOTOR ASSY		1
	6-7	★91-564-722-110	CONNECTOR 6P		1
	6-8	---	PWB, MOTOR		1
	6-9	91-572-085-110	SWITCH, LEAF LIMIT		1
	6-10	★94-917-565-010	SHAFT, SLED		1
	6-11	★92-625-191-010	SPRING, COMPRESSION		1
	6-12	★92-625-187-010	RING, CENTER		1

■ACCESSORIES／PACKAGE LIST

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q.TY
	1	★81-CD1-905-010	INSTRUCTION BOOKLET, EX	※	1
	2	★81-CD1-670-010	REMOTE CONTROLLER, RC-EX5 EX (U, E, K, ZB)	※	1
	3	★81-CD1-660-010	REMOTE CONTROLLER, RC-EX5 Z-TS (ZST)	※	1
	4	★87-050-015-010	AC CORD SET ASSY, U-1 (U)		1
	5	★87-034-594-019	AC CORD SET, E (E, Z)		1
	6	★87-034-999-010	AC CORD ASSY, UK (K)		1
	7	★87-042-062-010	PLUG, ADAPTOR S-1 6115 (Z)		1